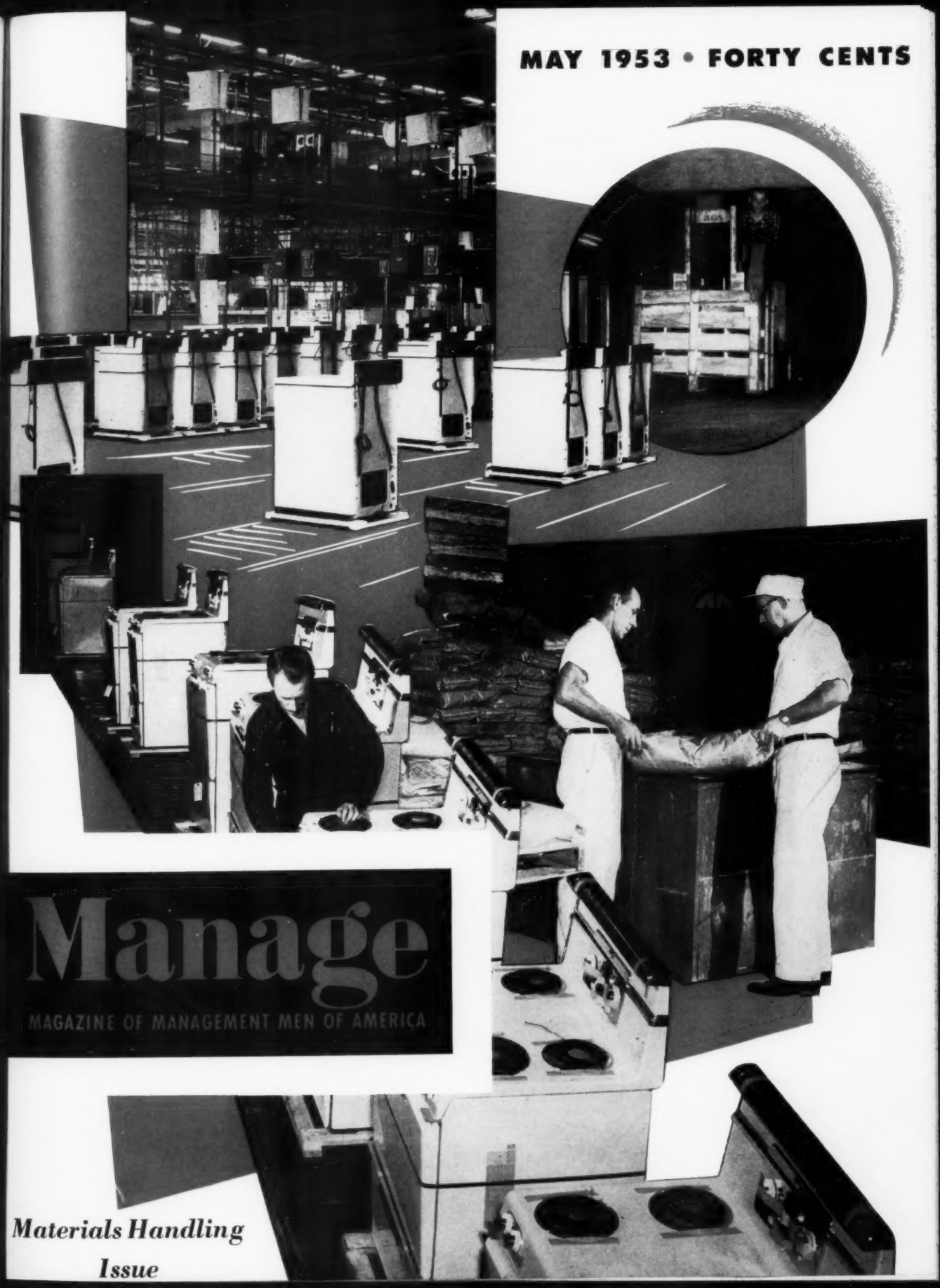
MAY 1953 • FORTY CENTS



Manage

MAGAZINE OF MANAGEMENT MEN OF AMERICA

Materials Handling Issue

The striking new Bel Air 2-Door Sedan, one of 16 beautiful models in 3 great new series.

Why so many owners of higher-priced cars are changing to Chevrolet this year...

Discerning men and women have *always* welcomed the opportunity to secure premium quality without paying premium prices.

And this is truer today than ever before judging by the *thousands of higher-priced cars* now being turned in on new 1953 Chevrolets.

You'll understand why when you see how Chevrolet offers you the beauty and elegance of America's *costliest* cars in its 16 magnificent models in 3 superb new series—widest choice in its field.

You'll understand even more fully when you *drive* a Chevrolet and discover how closely it matches the performance of higher-priced cars with its sensational new engine, improved Powerglide* and new Power Steering.*

And you'll want to act fast when you realize *how much money you'll save* with Chevrolet for 1953 in both purchase price and operating costs.

Stop in at your Chevrolet dealer's and learn how completely Chevrolet's wonderful new features give you *luxury-car* quality at lowest prices!

New Fashion-First Bodies by Fisher. New, richer, roomier interiors. Widest choice of body-types and colors in its field. New 115-h.p. "Blue-Flame" high-compression engine in Powerglide* models . . . highly improved 108-h.p. "Thrift-King" high-compression engine in gear-shift models. Entirely new economy of operation and upkeep. Entirely new Powerglide* with faster getaway, more miles per gallon. Entirely new Power Steering.* The softer, smoother Knee-Action Ride. Largest brakes in its field. Safety *Plate* Glass all around in sedans and coupes. E-Z-Eye *Plate* Glass (optional at extra cost). Chevrolet Division of General Motors, Detroit 2, Mich.

**Optional at extra cost. Combination of Powerglide automatic transmission and 115-h.p. "Blue-Flame" engine available on "Two-Ten" and Bel Air models. Power Steering available on all models. (Continuation of standard equipment and trim illustrated is dependent on availability of materials.)*

MORE PEOPLE BUY CHEVROLETS THAN ANY OTHER CAR!

CHEVROLET

One day of feeling better doesn't mean you're cured

EVER HAVE FLU, feel better, and go out too soon—only to have a relapse worse than the first attack?

For years the world has been sick. "Something-for-nothing," Welfare State, Socialism, "more-pay-for-less-work"—the disease has different names at different times and places, but it's the same trouble—loss of energy, ambition, faith-in-yourself.

Now much of the world and especially this part of it is feeling better; we think we'll live—as this is written it looks as though more housing, lower prices, lower taxes, and most important of all, less war, are in prospect. BUT—

Don't let's take it too easy too soon. The fever of inflation and debt have wasted the nation's strength and substance which have to be built back. If we continue our tried and true American medicine of hard work, and add the convalescent tonic of thrift, we'll really recover. But as any doctor knows, this first surge of "feeling better" is the dangerous stage:

A relapse could kill us.

WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

ABOUT THIS ISSUE

This issue of MANAGE has been designated as our Materials Handling Issue and, as such, most of the editorial content has been devoted to problems in materials handling. As these problems are universal ones, we are sure each and every management reader will be interested in the solutions offered in this issue.

Among the interesting and authoritative materials handling articles appearing in MANAGE in May are "The Foreman's Stake in Materials Handling" by W. J. Grohs and R. W. Mallick of Westinghouse Electric Corp. on Page 6; "'Muscle Men' Cost Too Much" by Walter E. Schirmer, a vice president of the Clark Equipment Co. on Page 8; "Frigidaire Goes Underground" by Robert W. Choate, Frigidaire division, General Motors Corp. on Page 10, and "Materials Handling in Foundry Operations" by R. L. Bradley, Lester B. Knight & Associates, Chicago, on Page 13.

ABOUT THE COVER

Through the splendid cooperation of the public relations department of Frigidaire division of General Motors Corporation, and the director of press relations, C. Carlton Brechler, the cover of this Materials Handling issue was made possible. It shows a few of the many materials handling techniques at work in Frigidaire's newly-constructed plant No. 3 at Moraine City, Ohio. With 1,177,740 square feet of floor area, this plant is the second largest of four Frigidaire factories in the Dayton area. This particular plant manufactures laundry equipment and electric ranges.

The new plant offers industrial scenes which are ideal illustrations of what is possible in the world of modern materials handling. The Frigidaire plant was so planned that the general flow of manufacturing throughout the building would incorporate many of the latest materials handling methods. One of the most unusual features in the use of a tunnel for more efficient materials handling between two plants. (See "Frigidaire Goes Underground" on Page 10.)

Manage

MAGAZINE OF MANAGEMENT MEN OF AMERICA

MAY, 1953 VOL. 5 No. 9

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IN THIS ISSUE

5 Editorially Speaking

6 The Foreman's Stake in Materials Handling

8 "Muscle Men" Cost Too Much

10 Frigidaire Goes Underground

13 Materials Handling in Foundry Operations

14 His Greatest Decision

17 We Can't All Be President

18 Fifth Annual Bowling Tournament

20 Management on Review

23 Foremen's Club of Dayton Offers Human Relations Lectures

25 Better America Series

26 Industrial Spotlight

27 What Labor Is Saying

28 How Would You Have Solved This?

30 All Outdoors

33 Manage Service Bureau

THIS ISSUE'S TOTAL CIRCULATION: 58,379

THE NATIONAL ASSOCIATION OF FOREMEN, EDWARD O. SEITS, President; HAROLD B. LYDA, First Vice President; MARION KERSHNER, Secretary-Treasurer; J. E. BATHURST, Executive Vice President.

The National Association of Foremen (NAF) is a non-profit, educational, management organization devoted to unifying all segments of management, foremen to president; to recognition of a professional status for these management men; to broadening the horizon of first-line management for more effective leadership; to strengthening the free economy in America.

Its 57,474 members include all management segments, enrolled mainly in autonomous but affiliated "area" or "company" management clubs. It also offers company memberships, and individual memberships in special circumstances.

For full information, address the executive vice president at 321 W. First Street Dayton 2, Ohio.

MANAGE is published monthly on the 5th by THE NATIONAL ASSOCIATION OF FOREMEN, as its only official publication. Entered as second-class matter Sept. 9, 1952 at the post office at Dayton, Ohio, under the Act of March 3, 1879. Printed in the U.S.A. Publication office 230 W. Fifth St., Dayton Ohio. All address changes and publications returned under postal regulation 3579 should be sent to editorial offices in Dayton. Editorial and executive offices 321 W. First St., Dayton 2, Ohio.

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Subscription rates: annual U. S. $4.00; foreign $6.00; single copy 40c except November convention issue for which $1.00 to non-subscribers. Annual subscriptions (U. S.) in lots of 50 to 500, $3.00; 500 to 5000, $2.50; 5000 and over, $2.25.

EDITORIALLY SPEAKING...

M. H. AND MANAGEMENT

Relatively speaking, the costs of raw materials and labor are set, and the selling price of the product cannot be increased because of competition. So an obvious way to cut costs and increase profits (or to make possible a reduction in the selling price of your product, thereby increasing sales volume) is to decrease the cost of materials handling within your plant.

Materials handling is of such paramount importance to modern management that this issue of MANAGE is our first materials handling number. Too often managers concentrate on raw product and labor costs without studying the inefficiency of materials handling. One heavy industry manager told me last month that he spent one month in reorganizing and bringing up to date the materials handling in his department, and thereby increased the labor efficiency by 18 per cent. In five years of daily sweat (and tears), he had worked to decrease waste of materials in his department and had only cut this particular inefficiency by one-half of one per cent. "Why," shouted our friend, "didn't somebody tell me about materials handling long ago?"

Materials handling is a management responsibility. It is a short-cut to more efficient mass production. It is a science on a par with production, marketing and sales.

MANAGE EDITORIALS

We ran into a question the other day which rocked us for a moment. "I'm not complaining," remarked Cal Arnold, "but why does MANAGE—or any magazine for that matter—always have an editorial page?"

In our particular case, Cal, it is MANAGE's way of expressing its personality. We have to have some kind of a personality because it is our privilege to spend only a few hours each month with every subscriber, in his home. If we do not stand for something, have something we think is good to offer, then we should be rejected.

The real gold of MANAGE is in the authoritative articles we present, written by men who positively know what they are telling you about. MANAGE is also a clearing house for information on what NAF management clubs all over the country are doing in the way of activities. A club's program chairman can always find some good ideas to put to work in his own club, just by thumbing through the section, "Management On Review."

As Jim Bathurst would say, "The editorial page is the frosting on the cake."

Statements made on this page are often factual deductions, done within the cranium of the Editor. Opinions and attitudes are generally those in keeping with the policy of the NAF and its affiliated groups of management men.

Arthur Brisbane once said, "Editorial pages should comfort the afflicted and afflict the comfortable."

That is all right for newspapers, but not much good to an association journal like MANAGE. We have to paraphrase it to something like, "Editorial pages should clarify the confused—and not confuse the clarified."

GREATEST POWER IN INDUSTRY

What do you think it is? Some will guess that it's all the invested capital put together—a union of stockholders, so to speak. Others will reckon it is organized labor. Some might even suppose it is all the machinery of American industry harnessed together.

But, give up . . . it is the purchasing power of the employees. Not the management team people, but the rank-and-file employees of American industry.

By investing only a small margin of their weekly savings, American industrial employees could buy all the common stock and controlling interest in every corporation in the country. It is possible and it is legal. In fact, hardly any corporation would be opposed to the idea because it would mean that every employee would have a material stake in the business and it would drastically reduce labor turnover, absenteesim, waste, strikes, slow-downs, etc.

We listened to a seasoned mining executive—a fellow by the name of George W. Potter of Joplin, Mo.—have his say about this last month. He declared that employees who think their corporations of employment make so much profit that they can afford unlimited wage increases and employee benefits, have every opportunity to buy stock in that company and receive (guaranteed by law) a share of all profits in addition to their wages.

An industrial Utopia!

Dean Sims

The Foreman's Stake

How many line supervisors have been trained to see materials handling problems and initiate improvements? Not many. Westinghouse Electric Corp., recognizing this fact and also recognizing that the line foreman is the man nearest to these problems, initiated a program for the education of these foremen in materials handling which has proved a complete success. Materials handling is a universal problem in industry and every foreman should be interested in learning more about meeting this problem.

By W. J. GROHS and R. W. MALLICK
Westinghouse Electric Corp.
East Pittsburgh, Pa.

MATERIALS handling is a tough problem and an expensive one. Its estimated cost in the electrical industry amounts to 36 percent of the labor dollar. It's made tougher by the fact that it's difficult to establish responsibility for material handling improvement. A few companies have assigned it the status of a specialized activity, the same as production, quality control, or accounting. Most companies have not been able to do this and have instead made a variety of other attacks. One such approach is to assign the responsibility for material handling improvement to the man nearest the problem—the line supervisor. But immediately there are two drawbacks.

The average foreman is not trained to see materials handling problems, let alone initiate action on them. Furthermore, he already has a myriad of other responsibilities and because he does not realize the terrific costs of handling materials, he unconsciously neglects material handling improvement. In addition to its cost as a man-hour consuming operation, material handling has many hidden costs. Here are some effects of material handling on manufacturing operations.

1. Steady flow of production depends on the absence or elimination of manufacturing interruptions. Every unnecessary movement of material means a delay between operations which adds to the value or usefulness of a product. Steady flow of materials means fewer overdues.
2. The quality of a product depends on how it is handled as well as actual manufacturing operations. The more the material is handled, the greater the damage hazard. Each move is a potential "quality" hazard. Better methods and fewer handlings result in fewer defects due to handling damage.
3. Shorter manufacturing cycles result because efficient handling keeps materials on the move.
4. Smaller inventories result from shorter manufacturing cycles and a steady flow of production which prevents materials from piling up.
5. Better utilization of space. The rate at which materials move into and out of an area determines how much material will be in that space at any given time and, in turn, the amount of space required.
6. Better working conditions always result from improvements in the methods of moving or handling materials. Where poor material handling exists, the result is usually a cluttered and hazardous workplace. Material handling, in industry, is the cause of approximately 25 percent of all accidents. Such a condition is the first sign of inefficiency. Furthermore, workers prefer sections with good working conditions. Poor housekeeping means poor material handling.
7. Labor relations are improved by efficient methods of handling materials. Many grievances are caused by poor material handling. Production standards are based on the availability of material. Workers are offered, under incentive systems, the opportunity to increase their earnings. When the material is not available, or when the worker must "move" it where such a move is not included in the value, the worker has a justifiable complaint. Reduction of the number of moves in a manu-

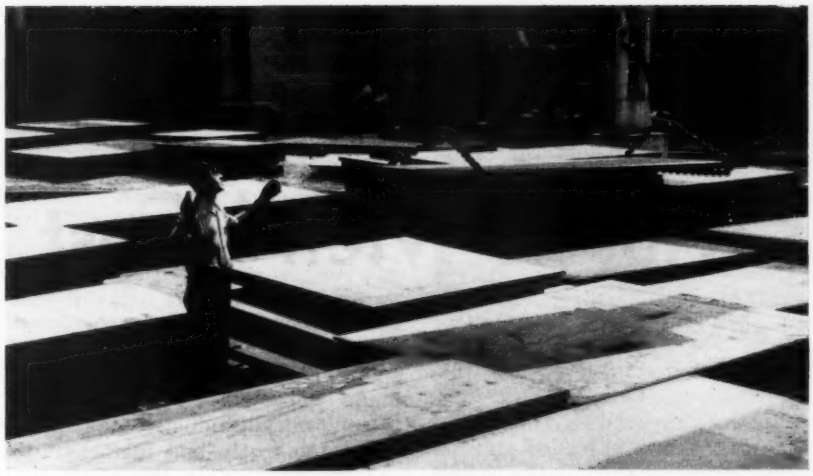
New storage equipment and a different layout can often mean the difference between a clean, efficient and convenient storage area and one that is not.

facturing cycle also reduces the opportunities for unjustifiable claims.

8. Investment in capital equipment is reduced in line with the use of more efficient handling equipment, and reduction of the amount of movement that takes place and more efficient use of manufacturing facilities and space.

Nor is the untrained foreman very often aware of these effects, and, again, does not have the knowledge to solve them. Obviously, he should be trained.

With these two major problems in mind, a supervisor's material handling training course designed to immediately and ultimately reduce costs was set up. After the



Materials handling reaches into every operation in the plant. It costs not only as a man-hour consumer but also through a variety of "hidden" effects on manufacturing cycles. Here a well planned yard makes transfer of steel plate an efficient and safe operation.

In Materials Handling

course was designed, its initiation consisted of three steps: selling the course to top divisional management, carrying out the course itself and following through with each participant.

Since the object of the course was to not only make supervisors conscious of the exorbitant costs of material handling but also to give them the fundamental improvement tools to work with, it was decided that each participant should as a part of the course select a problem in his shop area and carry it through to completion. Of course, such an approach also meant immediate cost reductions since the project was eventually approved by division management and the cost figures certified by the accounting department. Although the supervisor selected his own project, he was required to have it approved by his department head before starting work on it. As a matter of fact, his department head and division manufacturing manager were well acquainted with his progress throughout the course.

Selling the course to management was not a mere approval procedure. With a training-minded management, any course with real merit will be approved. The biggest advantage in selling this course to division management was the consequent support and weight he supplied to the course in the minds of each supervisor. The department heads selected the students who would take the course and each division manufacturing manager gave a preliminary talk before the supervisors selected from his division. Periodically, during the course the manufacturing managers were informed of the progress of their respective supervisors and a final report on each was also submitted to him. Those who had not entered a project or did not appear to be making progress were required to give an accounting to their superiors. This procedure was outlined to the group during the first meeting and was initiated in the belief that training must be done on a responsible basis. Perhaps it had as much to do with the success of the course as any other single factor.

The course was arranged in twelve two-hour sessions, one session per week. At the beginning of each session, the supervisor was given a chapter on the subject to be covered along with supplemental information such as reprints of articles or material handling equipment literature. These chapters were organized in a loose leaf notebook to give the supervisor a permanent record.

Generally, the lecture-discussion method was used to present the basic information. The instructor assumed the role of mediator in a discussion. All text material was reviewed and subsequently discussed for each session. Strip and sound films, slides, charts, blackboard development, and visits to various locations throughout the plant were used to supplement the lecture-discussion sessions. Group visits to plant areas were used to point out existing conditions needing improvement and improvements which had resulted in considerable savings. A typical project was used as a basis for explaining the correct improvement procedure. In addition, the instructor was always available for consultation on projects or course material.

Although exact figures for cost of the course would be difficult to determine, a dependable estimate of $200 per participant can be made. This figure includes time spent in the classroom by the supervisors, cost of preparing and giving lectures, and cost of all supplemental material. And what were the returns? The annual savings by the end of the course totaled $53,000

(Continued on Page 32)

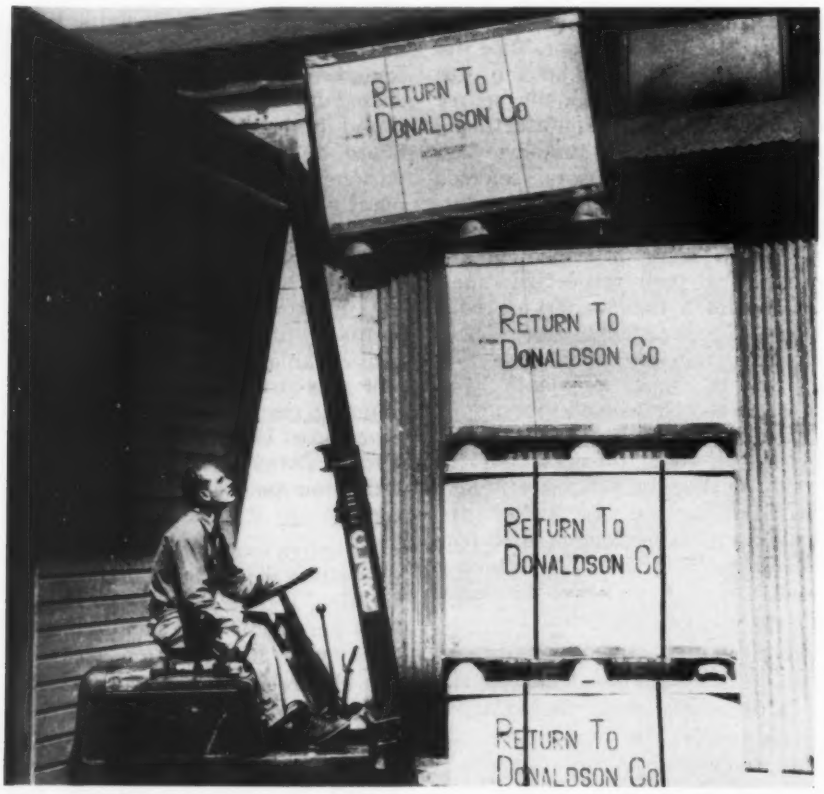
Materials handling has now come of age in the American industrial picture, Walter E. Schirmer, vice president of the Industrial Truck Div. of the Clark Equipment Co. in Battle Creek, Mich., asserts in this article. "Brain power" and "mechanical muscle power" have now replaced the "muscle men" in handling materials much more quickly, efficiently and economically.

"Muscle Men" Cost Too Much

By WALTER E. SCHIRMER

IT was not too long ago that "muscle men" were a common sight in industrial plants. They were the men who loaded and unloaded trucks, carts and cars and pushed, pulled or carried back-breaking loads from the receiving dock to storage, from storage to production, from production to shipping. The "strong-armed boys of the factory" were the match of many a circus "strong man."

But just as Nature relegated the cumbersome dinosaur to oblivion, so have mass production methods, rising labor costs and the increased skill, education and standard of living of the American labor force made obsolete the industrial "strong man." Industry today finds it far too costly and inefficient to use muscle power for materials handling. Instead, enlightened industrial management is turning to the combination of *human* "brain power" and mechanical "muscle power" to handle materials quickly, efficiently and economically. And not the least benefit in the substitution of mechanical "muscle" for human muscles, has been its value in the critical field of human relations.



A 2000-pound capacity, gas-powered fork truck is shown tiering the collapsible container-pallet—four high—awaiting the arrival of a highway truck.

In every branch of industry the substitution has created better jobs at better pay at the same time that management obtained increased productivity and reduced production costs.

According to one widely known industrial leader: "Productivity of American Industry progresses not so much by improved abilities and capacities of men and machines, as by the quantity and quality of mechanical aids placed at the workers' disposal. The only way to absorb abortive costs is to introduce better mechanical methods that make possible the production of more goods."

A store-keeping executive of a major rail system claims: "Palletized operation is so economical and the possibilities for broader use of pallets and fork trucks are so numerous that I believe we have only scratched the surface of this fertile field for savings in all branches of industry. I can visualize a future in which most materials will be moved and stored on pallets. Sources of supply will pack and ship their products on pallets; orders from their customers will so specify. Continuous development of modern handling equipment will make old methods and equipment prohibitively costly."

The great majority of handling operations today are what may be called "standardized"—the familiar installations of fork trucks handling palletized unit loads of materials of innumerable kinds and industrial tractors for mass hauling. But there has been no stoppage of human inventiveness, and there continues to be a steady "discovery" of new uses for mechanized materials handling equipment, new and ingenious ways to take advantage of the money-saving po-

tential of machines and special handling attachments.

Many an alert plant supervisor has reduced production costs and increased plant output by replacing outmoded methods of materials handling—cutting out the "muscle men"—with a modern system designed to fit his needs.

Drafting a materials handling plan calls for thorough study of packaging methods, storage procedures and flow of materials. The study originates in the company's own plant—but should be carried back through transportation of incoming materials to those points where the materials originate. Thus movement and processing may be visualized as a complete cycle, and all parts may be coordinated into an intelligently planned, integrated system. The success of such a system often depends upon the willingness of a company's supplier to cooperate in the design and application of the new materials handling methods.

COOPERATION BETWEEN MANUFACTURER AND SUPPLIER

How a cooperative approach to materials handling benefits both seller and buyer is illustrated by the following experience of a manufacturer of automotive equipment.

The plant supervisor was convinced that his company was losing large sums annually because of unsuitable methods of handling incoming parts. He determined to investigate the problem and try to develop a means of reducing these unnecessary costs. As a "test case" he chose a pump unit that his company purchased in ready-to-assemble form. He got permission from the supplier to make a detailed survey and time study of his materials handling operations. As a result of this project, the supervisor was able to develop a simple, sound and practical method of materials handling between the supplier's plant and his own plant—a method that paid for itself in less than a year.

A special collapsible pallet-crate holding six units for shipment—two on the pallet at the bottom, and two each on the trays above.

Previously, pumps had been crated and shipped two to a crate. Time studies revealed that crating at the pump plant required 20 minutes, and uncrating at the destination required an equal length of time.

Now pumps are packed in palletized unit loads of 36 pumps—three layers deep, 12 in each layer, securely strapped. Checkers at both plants were eliminated because they were unnecessary under the new system. Each unit is open and can be checked at a glance. The unit load remains intact from the time it is assembled until it reaches the assembly line. Palletized units are loaded into carriers by fork trucks; unloaded at the destination by fork trucks, and placed on trailers; hauled by tractors to storage where they are tiered to a height of 11 feet by fork trucks, and moved from stock to the assembly line by fork trucks.

Empty pallets are shipped back to the pump company to be used again.

Immediate benefits: a saving of 19 man-hours per unit load, and the net sum of $21.60 lopped from the cost of each unit load delivered at the assembly plant.

An alert supervisor in a farm implement company, on the warpath against mounting freight charges, collaborated with the manufacturer of an air cleaner unit in developing a collapsible compartmented container for use with a light-weight expendable pallet. The container holds 300 air cleaner units, each in a compartment, as against the individual compartments formerly used. The loaded container is protected top and bottom by .04 gauge aluminum caps, and is strapped to a 42x48 inch pallet with round corrugated paper legs. Pallets can be loaded two-wide, the 42-inch side, for a highway truck, or two-wide, the 48-inch side, in a freight car.

Yardlift-40 pneumatic-tired truck, with 15 cubic foot shovel dumping a load of coal into the stoker.

Benefits were quick and sizable. Packaging costs dropped 40 per cent and the expendable pallet, weighing only 5½ pounds in contrast to a conventional 100-pound pallet, eliminated 94½ pounds which previously had to be paid for at the supplier's high freight rate.

The pallets are sturdy enough to stand rough handling and tiering four-high; in many instances they serve for several trips. For return to source, the collapsed containers are packed between aluminum caps for protection and strapped to the pallet.

MEETING CUSTOMER REQUIREMENTS

A midwestern manufacturer of heavy duty machinery was faced with the problem of meeting different shipping specifications for three purchasers of the same product. Customer A required that his machines be crated while Customers B and C specified that machines be shipped uncrated as separate

(Continued on Page 32) units.

FRIGIDAIRE GOES UNDERGROUND

By Robert W. Choate,
Materials Handling Foreman,
Frigidaire Division,
General Motors Corp.

WITH twelve assembly lines in two buildings pouring out an almost continuous flow of major household appliances, our problem was to transport these finished products to a third building for crating, warehousing and shipment.

Movement of the products above ground meant crossing one highway and four sets of railroad tracks, and involved the risk of exposing the appliances to the weather.

The problem was solved through use of a tunnel 20 feet wide and nearly a third of a mile long. The material handling system incorporates more than 6,300 feet of conveyors, 151 electric drives, 82 electric eyes, 74 timers and several hundred relays.

The main line is fed by the 12 assembly lines and breaks down into 11 laterals in the warehouse. The system requires only two dispatchers and four maintenance men for normal operation.

Finished products have pallet-like crate bases and travel on roller conveyors. They ride the main line in 26-foot-long groups, all products in a given group being the same type and model.

The groups are built up on an unusual conveyor application that is located between each assembly line and the main line. When a product rolls off the final assembly line it is conveyed down a ramp into the tunnel and picked up on an endless belt of "free" rollers that looks like an apron conveyor. An automatic stop holds the unit on this "roller flight conveyor" until the 26-foot train is built up.

While the units are waiting, the rollers pass under them without transmitting forward motion. At the proper time, the stop is released and a system of electric eyes and timers feeds the train onto the main line.

To overcome the slippage that would make this system impractical we equipped the accumulators with a horizontal wooden bar that lies between the rollers. When the stop is released, the bar rises to touch the bottoms of the rollers. Then they become "live" and the train moves at twice the speed of the rollers.

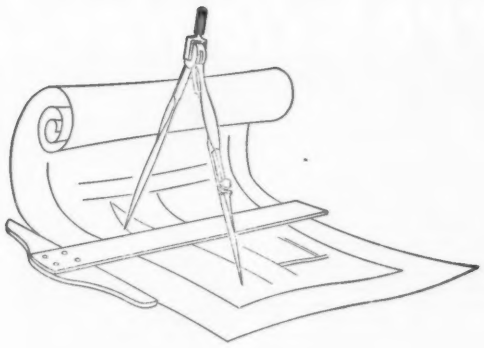
The cabinets leave the accumulator at 60 feet per minute but are picked up on the main line at 90 feet per minute. The speed difference separates the units so that their tops do not touch when the track dips down and up as the tunnel passes under the railroad tracks.

At the other end, electric eyes and hydraulic switches transfer the trains to one of 11 lateral conveyors. These are at right angles to the main line and feed the crating and inspection aprons.

The laterals are belt-driven roller conveyors designed so that all the rollers are not activated at the same time. Only the two equidistant sections of the drive belts that are thicker than the rest of the belt transmit power as they pass under the rollers. Watching the conveyor it seems that a ripple is running along it away from the crating aprons. A cabinet stands stationary until the ripple passes under it; then it moves forward a short distance. Each succeeding ripple moves the cabinet closer to the crating apron, but not enough power is transmitted to push a cabinet onto the apron. The laterals serve as a bank, keeping a continual flow of products spaced on the aprons.

In addition to solving the problem of crossing roads and tracks and eliminating possible weather exposure, we have found that our underground conveyor system is ideal for other reasons. It offers no barrier to factory traffic or material flow, it eliminates danger of dropping finished products, and it necessitates an absolute minimum of man handling. Also, the same equipment can handle a continuous or intermittent supply of products of varied sizes and weights.

Frigidaire solved its problem in materials handling by constructing an underground tunnel from production line to warehouse. 26-foot trains are built up on an unusual conveyor leading from the assembly line and are then fed onto the main line by a system of electric eyes and timers, as shown above.



PUTTING PROFIT INTO PLANNING

is part of the "Blaw-Knox Job" for industry

The year ahead offers rich rewards to those who meet modern conditions with modern equipment, processes and plants.

A way of doing things that was considered *good* yesterday may not be *good enough* today in the light of competitive situations and technological advances.

Blaw-Knox engineering thinking and engineered products are taking an active and creative part in bringing industry up to the standards and requirements of tomorrow.

If your business is within the scope of Blaw-Knox, it will pay you to find out how and to what extent Blaw-Knox can be useful to you in "getting set" for the days ahead. An engineer-to-engineer discussion is invited.

BLAW-KNOX *Company*

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Blawnox, Pa.
- Concrete Road Paving Machinery
- Clamshell Buckets
- Contractors Equipment
- Gas Cleaning Equipment
- Open Steel Flooring
- Radio, TV and Transmission Towers
- Steel Forms for Concrete Construction
- Chemical and Process Equipment
- Water Colled Equipment for High Temperature Furnaces

Buflovak Equipment Division
Buffalo 11, New York and Mora, Minn.
- Machinery for the Chemical and Food Processing Industries
- Specialized Machinery for the Dairy Industry

Chemical Plants Division
Pittsburgh 30, Pa.
- Complete Chemical, Petrochemical, Industrial and Petroleum Plants

Foote Construction Equipment Division
Nunda, New York
- Black Top Road Pavers
- Concrete Road Pavers

Lewis Machinery Division
Groveton, Pa.
- Rolling Mills and Auxiliary Machinery For Rolling Ferrous and Non-Ferrous Metals

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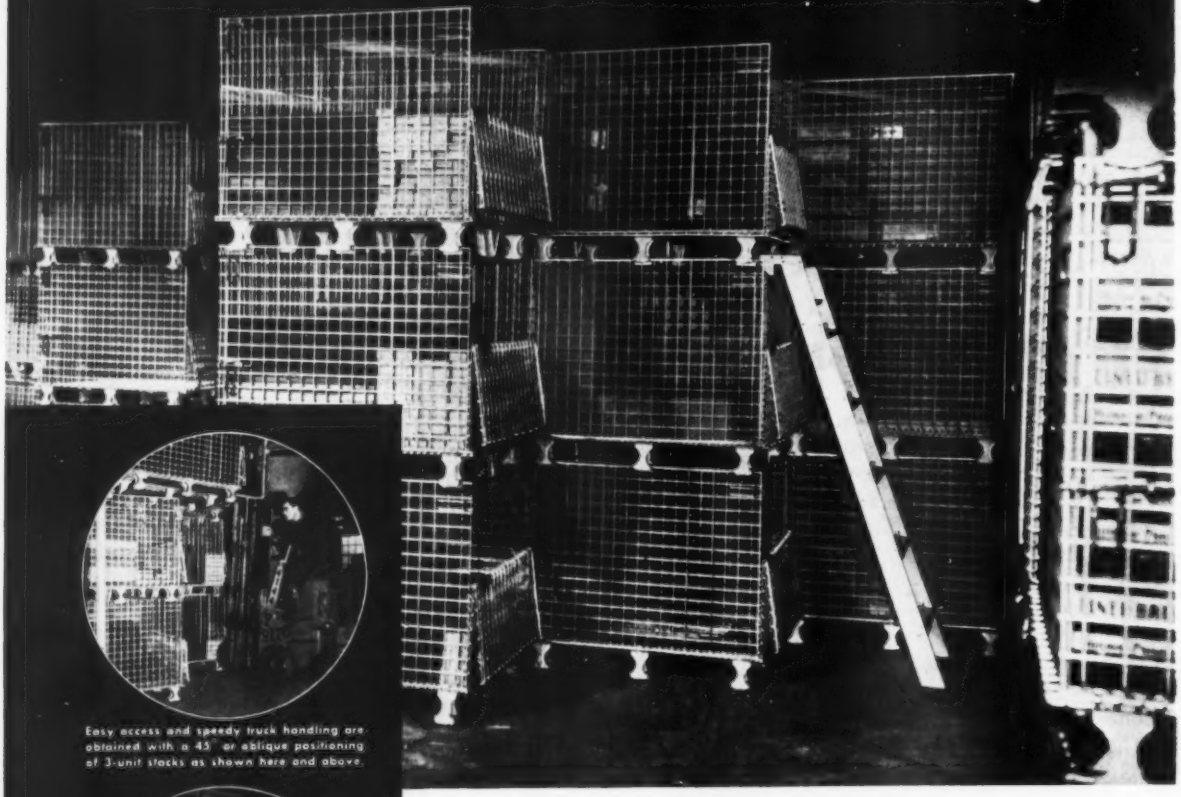

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MATERIALS HANDLING
In Foundry Operations

By R. L. BRADLEY

Lester B. Knight & Associates
Consulting Engineers
Chicago, Illinois

Although not as advanced as in continuous process industries, definite ideas on improved materials handling in foundry operations have been offered in recent years. Foremen engaged in foundry operations where advancement is lacking certainly should read this article and work toward having materials handling improved in their foundries.

MATERIALS handling largely has reached its present development, and most frequently is thought of, in relation to continuous process industries. Where successive lots of identical products are produced on a mass production basis, the thinking on materials handling methods and equipment is quite clear.

While materials handling plays a major role in practically all foundry modernization programs, it is seldom recognized as such, and is less advanced than in other industries.

It is true that steps in that direction have been made coincidentally with the development of such machines as core blowers, mullors, blast equipment, etc. Lift trucks and various types of conveyor equipment have materially reduced the number of "lift and carry" operations in foundries today. Generally speaking, however, foundry castings still are made in much the same manner as they were years ago. As a result, until the time comes, if it ever does, when castings are made without cores or risers, one outstanding way to reduce foundry costs is further use of modern materials handling.

Jolt squeezer molding, as it is still performed in hundreds of foundries, is a typical example of how basic materials handling practices may be applied profitably. In such an operation, assume an average molder produces 150 molds per 8-hour day, including pouring. Outside of hand tools, the only mechanical equipment used is a molding machine.

OLD-FASHIONED METHODS

Here are the steps taken in such an operation: Sand is shoveled into the flask (in producing 150 molds, the molder shovels approximately 6 to 10 tons of sand, which means that for every ten molders, 60 to 100 tons of sand are shoveled every day); then the molds must be carried from the machine and set on the floor, an average distance of about 20 feet. As a result, each molder carries 5 to 9 tons of molds, in addition to shoveling the 6 to 10 tons of sand.

Assuming an average metal weight of 15 pounds per mold, the molder also must carry approximately one ton of metal, in ladles holding 50 pounds each, an average of 20 feet with each ladle. Thus, a molder who receives $1.85 per hour costs the foundry employing him from $.77 to $1.34 per ton lifted per day.

Modern materials handling can change this procedure, greatly reducing the physical effort and attendant turnover in personnel as well as increasing production almost two-fold. These results can be accomplished in several ways, all fundamentally the same in so far as they directly affect the effort and motions of the molder.

Conveyor belts can be installed to convey the sand from a central point to sand hoppers over the molding machines, thus eliminating the shoveling of sand. Work of the molders can be further reduced when conveyors are used to take away the molds from the machines.

Pouring, sometimes but not always performed by the molders, can be improved greatly through the use of larger ladles hung from an overhead monorail which eliminates the "carry" operation. The larger ladles also reduce the number of return trips to the molten metal supply for refilling.

MORE MECHANICAL HANDLINGS

Similar applications of materials handling, and consequent benefits, can be made in foundry core room and cleaning rooms.

For example, cores can be moved from the coremakers to the oven by rack and lift truck or by conveyor. Sand can be delivered to the coremakers by conveyor belt, by overhead monorail or by a pneumatic system. Despite this, there are many foundries where such sand delivery is accomplished by wheelbarrow.

Delivery of finished cores from the core room to the molders usually is by hand truck. Larger foundries, and production foundries in particular, frequently employ an overhead monorail system for this purpose. Such a method not only reduces labor costs, but also helps reduce the amount and cost of core breakage.

Use of materials handling equipment in the cleaning room of a foundry presents a more difficult problem. A chief reason is the fact that a jobbing foundry's castings usually are irregular in shape, size and weight, thus presenting a variety of handling problems.

Machine-made molds, on the other hand, have a flat bottom or rest on a bottom board, and thus are easily conveyed. Similarly, cores can be stacked and carried in boxes or trays, also simple to convey. Sand handling as well, whether by belt conveyor, bucket and monorail or pneumatic system does not present an unusual handling problem.

Production foundries usually can justify belt or overhead conveyors

(Continued on Page 32)

His GREATEST Decision

By GEORGE W. FALK, President, Independent Lock Co.

MORRIS FALK

MY father, Morris Falk, came to America as a poor immigrant in 1901. His life has truly been a "Horatio Alger" story. One that could have only happened in America despite his widely recognized keenness and remarkable ability. As I look back on his full and active life I recall one situation in particular which I am certain called for the greatest decision he had made up to that time or since.

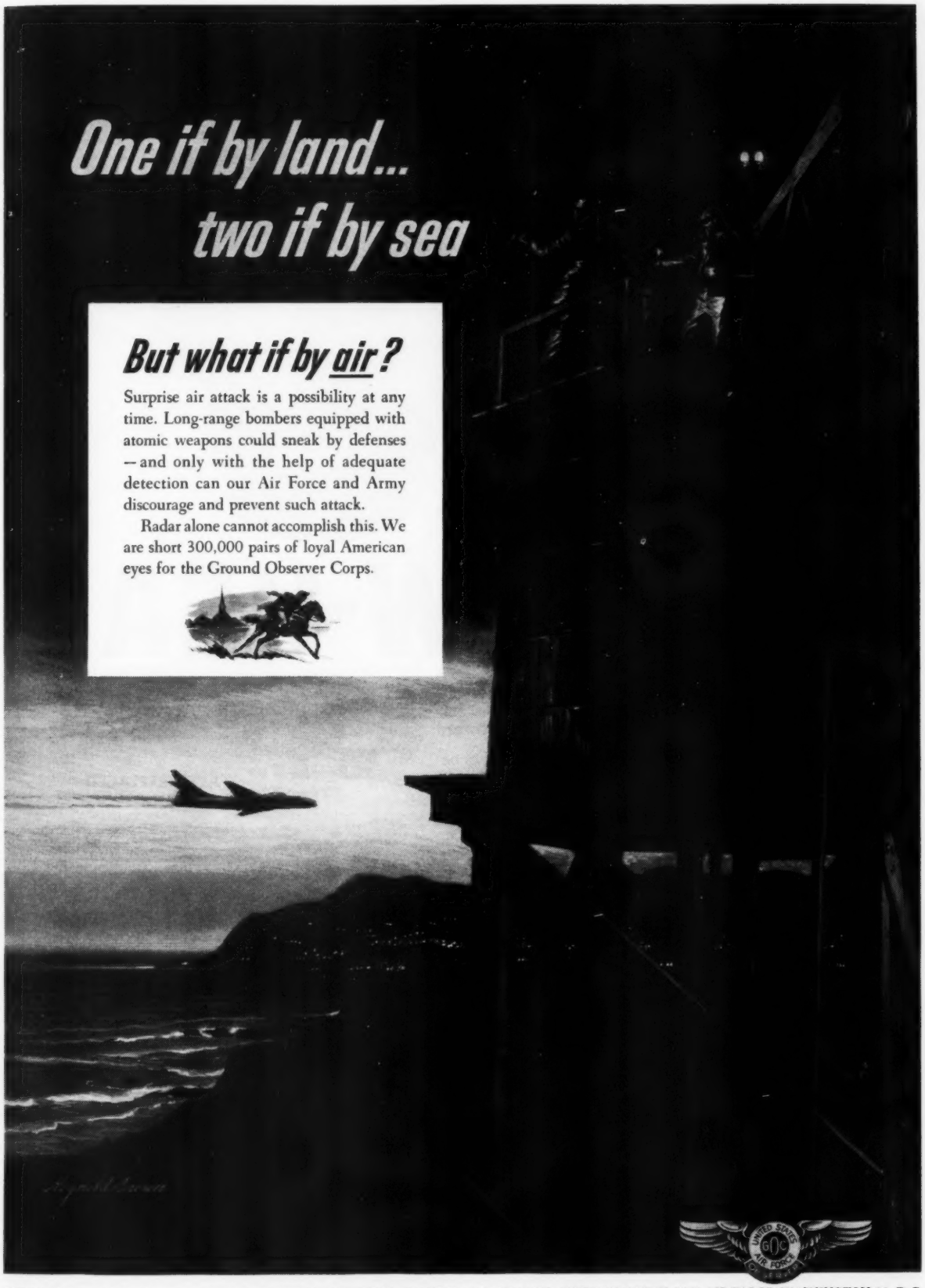
Originally he started a small business making key blanks which employed about fifteen people. During the first ten years of the business, he had a partner with whom he got along very well. There came a time, however, when there was a sharp difference of opinion between them as to basic matters of policy. Dad wanted to expand the business substantially at the expense of taking out profits. His partner wanted this profit taken out at the end of each year. Finally, his partner issued an ultimatum to either buy out his interest or to do things his way.

If compared to values today, the amount involved would seem small, but at that time, it represented much more money than was within Dad's reach, and far more than the business seemed to be worth. When he approached the bank for such a loan, they laughed at him for the extremely poor risk involved. However, he went to a prominent business man in the city, who fortunately had faith in this young man who wanted to get ahead and who gave him the necessary loan to consummate the deal.

Dad's decision to mortgage his future for many years eventually paid off. With the help and assistance of very able young men in the organization, the company has grown to be one of the leaders in the builders hardware field. Today the company has six plants in different parts of the country employing about 1500 people. I am proud that I have been able to follow in his very capable footsteps when he turned over the office as president of the company to me.

While ostensibly Dad is supposed to have retired, today he continues as an active participant in the developments of our company, and I do not hesitate to admit that we would be at a loss without his advice and guidance.

While he has had to make thousands of decisions since, I am sure he will agree that his greatest decision, and the one from which the growth of the company developed, was when he decided to buy out his partner so that the company could forge ahead.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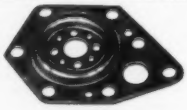

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"I do not despise genius—indeed I wish I had a basketful of it instead of a brain, but yet, after a great deal of experience and observation, I have become convinced that industry is a better horse to ride than genius. It may never carry one man as far as genius has carried individuals, but industry—patient, steady, intelligent industry—will carry thousands into comfort and even celebrity, and this it does with absolute certainty."—Walter Lippman

We Can't All Be President

By WILLIAM LEVY

SOME years ago I was hit between the eyes by a statement made by a foreman at one of our Management Unity Seminars. He said, "I've been a foreman for 25 years and I've got the best darn job in America." This started me thinking on the subject of horizontal growth and I'm convinced that if more people adopted this outlook, their lives would be richer and industry would get a tremendous boost.

All my life I was brought up on the Horatio Alger concept in which we tell the youngster, "Johnny, if you'll work like blazes and live a good clean life, someday you may be President of the United States." Who are we kidding? There are 160,000,000 Johnny's and *one* president. He has less chance of being president than you have of winning the "Stop the Music" show! We say the same thing to the foreman. "Joe, if you'll burn the midnight oil and give it all you've got, some day, you may be president of this company." We don't stop to think that there is only one president, a few vice-presidents, plant managers, etc. Common sense tells us we can't all be president. In fact we can't all be superintendents or general foremen. I don't want to discourage people from looking upward. That will take care of itself. But why don't we look at the possibility of growing on the job every day so that we can say, "I'm bigger, my job is bigger, and my life is richer and more complete than ever before."

A STAR IS A STAR

When you look in the skies on a clear evening you see thousands of stars. Some of them are first magnitude and shine very brightly. Others are less bright but still visible to the naked eye. But beyond those that you see are millions of other stars, just as important and just as significant. Every member of management is a star, if he could only see it.

I remember very vividly a statement I read some time ago by J. K. Morley who said, "Life is very much like a game of bridge. You must play the hand that is dealt you. The greatest glory, after all, is winning with a poor hand and the greatest disgrace is losing with a good one." I maintain that any man who has what is takes to be a member of management has been blessed with sufficient ability to be a truly big man. Most of us tend to vastly underestimate our own capacity.

Why does one man say with pride and enthusiasm, "I'm a foreman" and another say apologetically, "I'm *only* a foreman." I think the reason is fairly simple. The one man looks upon his work as a chore, a means of making a living, a dead-end highway. The other man, occupying a similar position looks upon his work as a challenge, a responsibility and an opportunity to make a really big man of himself.

When we were tapped on the shoulder and dubbed a member of management, we were immediately accorded a number of privileges and the authority that went along with the job. In most cases we were given considerations that did not exist previously. But along with privileges and authority, there was another important adjunct—responsibility. Now we were made responsible for guiding the work and lives of others. True, it's tough and sometimes it seems like a thankless task, but can you think of a more important one when leadership is needed so badly not only in industry but throughout our nation?

As practical men I believe we are interested in the "why" of horizontal growth but we're more interested in getting down to brass tacks and finding out "how". Are there any definite suggestions that can be offered on how we can develop on our present job? I think so and I offer them, not as a sure-fire cure-all, but as practical helps which will work providing you have the desire. Remember, you can lead a horse to water but you can't make him drink—unless he's thirsty. If you're not thirsty, my comments are empty phrases.

DEVELOP A SENSE OF SOCIAL RESPONSIBILITY

Push your influence out beyond the factory walls. Community and civic organizations can benefit a great deal from active participation by industrial supervisors who can bring to their activities the benefit of their skill in organization, getting things done and maintaining a practical viewpoint. If we want the public to understand and follow industry, we must provide the public with some worthwhile and active leadership.

You may wonder how you are going to gain if you are busy helping others. As Colyer Snyder has stated, *if you know, you owe.* Funny thing, too. The more you give, the more you get and the bigger you become. Does that make sense? Believe me, it has worked for a lot of people. Why not you? Where are you going to start? That's easy. It can be the school,

(Continued on Page 34)

FIRST BALL—Getting the Detroit Area NAF Telegraphic Tournament off to a good start, is Dan Coyle, Budd Company plant manager and member of the Budd Supervisors Club of Detroit, Mich. In rolling the first ball in the tournament, he made a perfect 1-3 pocket strike.

MIDWEST SECTION OVER-AVERAGE TEAM CHAMPS are the members of the Service Team of Oliver Management Club, South Bend, Ind. They are, left to right, Carl Long, Paul Sheetz, Gene Houck, Ray Bostedt and Don Keech. Keech was individual over-average winner at the South Bend Tourney and also came in sixth in the National Classic.

BILL MEEK, ZONE A VICE PRESIDENT, presents the Zone A Trophy to the Alley Oops II Team of Lockheed Management Club, Burbank, Calif., who won team over-average honors both in the Los Angeles and National Tournaments. Shown are, left to right, Meek, Don Patterson, Ralph Tomek, Ken Hall, Sid Rosin and Les Moore.

FIFTH NN
BOWLING TUR

High Over-Aver dividua

POS.	NAME	TEA	
1.	R. G. Fuller	Growlers	North
2.	K. Swanson	Eaton No.	Eaton
3.	Lloyd E. Zondler	P.D.'s	Lock
4.	Ralph Tomek	Alley Oop	Lock
5.	C. Hart	D. A. C.	Doug
6.	Don Keech	Service	Olive
7.	Frank Denby	Mixers	Conv
8.	B. P. Boucher	No. 15 Wo	Conv
9.	Everett Higbie	T. A. Make	Colg
10.	Tom E. King	Moderniz	Conv
11.	Al Halaska	57's	Lock
12.	W. Rikli		Amer
13.	Adam Matura	Hydraulic	Bend
14.	H. C. Barton	Worthing	Wort
15.	William Walchter	Accountin	Bend

High Team Ac infall V

POS.	TEAM	COM
1.	Hotel Texas	ir—Fort
2.	Wing Dings	as—El S
3.	Main Office	ican Stee Indiana

High Individual Ga tual Pi

POS.	NAME	TEA	
1.	Chuck Snyder	Team No.	Huss
2.	Walt Aurada	Plant Engr.	Ohio
3.	O. D. Druliner	N.A.A. Sta	North
4.	J. Overdeer	Lofters	Conv
5.	Charles Lower	Receiving	Gerit

Team Over ge Win

POS.	NAME	COM
1.	Alley Oops II	Lockheed—k
2.	Modernization	Convair—rth
3.	T. A. Makers	Colgate—lle
4.	Growlers	North Ame Los Ange
5.	AA Team No. 10	American A —Tulsa
6.	P.D.'s	Lockheed—k
7.	No. 15 Wood Mill	Convair—rth
8.	Indirects	Convair—rth
9.	No. 6 Gutter-Balls	Convair—rth
10.	Lofters	Convair—go
11.	Industrial Engineers	Colgate—lle
12.	Mixers	Convair—rth
13.	Punks	Convair—rth
14.	Hotel Texas	Convair—rth
15.	Parts Pirates	Lockheed—k
16.	Spoilers	Convair—rth
17.	No. 2	Southwest L.A.
18.	Buckaroos	Solar Airc n Diego

TH NNUAL
G TURNAMENT

er-Aver dividual Winners

TEA	COMPANY	SCORE
Growlers	North American—L. A.	204
Eaton No.	Eaton Mfg.—Battle Creek	184
P.D.'s	Lockheed—Burbank	147
Alley Cop	Lockheed—Burbank	138
D. A. C. K.	Douglas—Tulsa	138
Service	Oliver Plant No. 1—So. Bend	138
Mixers	Convair—Ft. Worth	135
No. 15 Wo	Convair—Ft. Worth	132
T. A. Mak	Colgate—Jeffersonville	132
Moderniz	Convair—Ft. Worth	131
57's	Lockheed—Burbank	131
	Amer. Forging & Socket—Pontiac	131
Hydraulic	Bendix—South Bend	128
Worthingt	Worthington Buffalo Works	126
Accountin	Bendix—South Bend	120

Team Ac Pinfall Winners

	COMPANY	SCORE
s	ir—Fort Worth, Texas	2795
	as—El Segundo, California	2732
	can Steel Foundry—Hammond, Indiana	2731

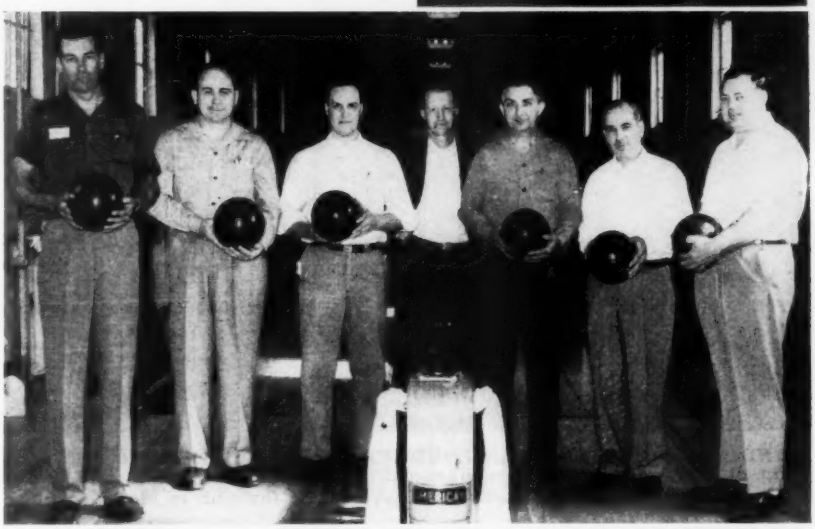
dual Ga tual Pinfall Winners

TEA	COMPANY	SCORE
Team No.	Hussmann Ref'r.—St. Louis	265
Plant Eng	Ohio Rubber—Lake County	246
N.A.A. Sa	North American—Los Angeles	245
Lofters	Convair—San Diego	245
Receiving	Gerity Mich. Corp.—Detroit	242

m Over- ge Winners

COM	3-GAME AVERAGE	SCORE	OVER AVERAGE
ockheed—Bk	2115	2572	457
onvair—Fth	2058	2397	339
olgate—Jeff	2271	2574	303
orth Amer Los Angeles	2265	2558	293
merican A —Tulsa	2181	2438	257
ockheed—Bk	2136	2389	253
onvair—Fth	2232	2480	248
onvair—Fth	2196	2441	245
onvair—Fth	1812	2045	233
onvair—San o	2274	2505	231
olgate—Jeff ville	2232	2446	214
onvair—Fth	2277	2491	214
onvair—Fth	2346	2557	211
onvair—Fth	2589	2795	206
ockheed—Bk	2085	2283	198
onvair—Fth	2148	2345	197
outhwest L.A.	2010	2207	197
olar Aircr n Diego	2343	2536	193

CHUCK SNYDER, high individual game actual pinfall winner of the National Tournament, is pictured here in action. Chuck, bowling with Team No. 1 of Hussman Management Club, St. Louis, Mo., racked up a 265 to lead up all NAF keglers.



T. A. MAKERS TEAM of the Colgate Management Club, Jeffersonville, Indiana, copped third place in the team over-average competition in the National Tournament. Left to right are George "Joe" Brumbach, Garland Hobson, Fountain Lewis, Henry "Red" Beutel, Carl Lovell, Everett Higbie and Deward Mitchell.

THE HOTEL TEXAS TEAM of Convair Management Club, Fort Worth, won the first place actual pinfall award in the National Tournament with a score of 2795. Team members are, left to right, George Symm, J. E. Grady, Sam Elliston, Frank Flifeather and Jim Dowell.

Management on Review

INDIAN PRINCESS OKEMA BOUDINOT teaches Ed Fleishnick, vice president of the American Airlines Administrative Association, to do the "Indian Two-Step" following an exhibition she gave before the club in March.

THE FOUR SINGING WAITERS of the Kilgore Management Club helped to provide the entertainment for "Shop Club Night" held recently in Columbus, Ohio. The affair was sponsored by all NAF clubs in the Columbus area.

TULSA CLUB CONDUCTS TOUR

Tulsa, Oklahoma—The Tulsa Management Club recently sponsored a tour of local industrial firms for 37 boys from the Sequoyah Vocational School, Tahlequah, Oklahoma.

The school was organized in 1868 by the government for boys and girls of the five civilized Indian tribes. To qualify for entry, a student must be at least a quarter blood Indian, from a broken home, or the father or mother deceased. Students must work their way through this school.

The students and their vocational shop instructor R. D. Teague were conducted through the Ramsey Winch Manufacturing Co., the Frank Wheatley Pump & Valve Manufacturing Co. and the National Tank Co.

E. R. Lindsey

CONVAIR MUG O' THE YEAR

San Diego, Calif.—First Mug O' The Year awarded by the Convair Management Club has been presented to B. F. (Sandy) Coggan, manager of Convair's San Diego division, by R. F. Ashe, club president.

Selected by the club's 2000 members in recognition of his record at Convair, for his progressive policies, and his personal interest in supervisory personnel and employees, Coggan was awarded the Mug after one year as division manager.

FREEDOMS FOUNDATION AWARD

Grand Rapids, Mich.—The essay "Youth's Opportunities Under Free Enterprise," written by Karen Block, daughter of a Nash Kelvinator metal finisher, recently won a second place award in the National Freedoms Foundation competition. Miss Block originally submitted her essay in the First Annual Nash Kelvinator Management Club Scholarship competition and won the $200 scholarship with it. The Management Club entered the essay in the Freedoms Foundation competition.

Miss Block's essay points out that the economic system is becoming more complex, but this very complexity opens up more freedom of choice. She emphasizes, however, that personal initiative and faith in self are all-important factors in any success.

G. E. Gebben

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AFTER DINNER CHAT—Shown above following an American Blower Management Club meeting are, left to right, H. E. Barth, American Blower vice president; John Fisher, Canadian radio commentator; C. T. Morse, American Blower president, and H. L. Simpson, club publicity chairman.

SOLAR ALL FAITH CHAPEL

San Diego, Calif.—A unique industrial project—an all faith chapel on the grounds of Solar Aircraft Co.—is now being built by company employees on their own time.

The place of worship was conceived by Edmund T. Price, Solar president and general manager, who offered to provide the site and materials if company employees would volunteer to build the structure.

Price envisions the chapel as "a refuge of quiet in our busy, noisy lives" and an aid in "keeping alight the torch of faith and inspiration."

CHARLES C. CONLEY, a former two-term president of the Foremen's Club of Greater Cincinnati, has been appointed to the newly-created position of supervisor of research of Houdaille-Hershey Corp.

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Impact Sockets, Extensions, Adapters, Universal Wrenches

Here is a complete line of production tools — specifically designed to meet every nutrunning requirement—specifically built to withstand the strain and shock of impact tool operation.

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APEX TOOLS

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FLAGS FOR THE SQUADRON—Roy Ashe, left, president of the Convair Management Club, San Diego, Calif., presents to young Jerry Tyson, leader of the club-sponsored Air Explorer Squadron 340, Boy Scouts of America, a new squadron flag as well as an American flag during ceremonies at which the squadron received its national charter.

LECTURER AT CORNELL U.

Dayton, O.—Dean Sims, NAF manager of public relations and editor of MANAGE, has been invited to be a guest lecturer before industrial journalism classes at Cornell University. He gave his first lecture recently on "The Role of the Supervisor in Management Communications."

The NAF staff official was a guest at the White House press correspondents' stag party for President Eisenhower in Washington on May 8.

CLARK S. JUDD, retired chairman of the American Brass Co., spoke on the history of the brass industry at a recent meeting of the Foremen's Club of the Buffalo Branch of the American Brass Co.

Foreman's Club of Dayton Offers Human Relations Lectures

Dayton, O.—The Foreman's Club of Dayton has come up with another "first" in this highly industrialized Miami Valley. With the compliments of the club, Dayton area industries have been receiving "supervisory human engineering" lectures from the club's executive secretary, Glen Massman. In the past four months, Massman has given a series of four one-hour lectures to approximately 500 supervisors at Standard Register Company, National Cash Register Company, Harris-Seybold Company, Univis Lens Company, and Sheffield Corporation.

"Technological progress will continue, but the greatest need of business and industry will continue to be the development of men possessing 'know how' (the boss) into leaders who command the respect, confidence and loyalty of those employees looking to them—management—for that leadership," stated Massman in a message to heads of Miami Valley factories and plants. "This makes the number one job facing management *human relations.*"

Massman has titled each of his one-hour presentations as follows:

1. *The Greatest Need of Business and Industry*
2. *What a Person Expects from Life*
3. *It's YOUR Future—What About It?*
4. *How Hungry Are You?*

Don Wood, president of the Dayton Foreman's club, said the series of training lectures are being made available to all industries in the area "because industry in this part of the country has been good to our club for over 30 years and we hope to repay in part the many considerations. We feel we have in Glen Massman one of the most capable management training directors in the country, and we are glad to share our club's good fortune with the industry which has made our organization possible."

Wood stated that results were proving that Massman has done a "whale of a good job in bettering labor-management relations in Dayton area industry."

U. S. district court judge Lester L. Cecil of Dayton wrote Massman that "you have been responsible to considerable extent for the success that we have had in this community in the matter of having few labor troubles."

Glen Massman, executive secretary of the Foreman's Club of Dayton, is pictured conducting one of his lectures on "supervisory human engineering" before a group of Miami Valley supervisors.

Learn More About Materials Handling

Your effectiveness in your job as a factory executive can depend upon how much you know about this vital subject.

Materials handling fundamentals and advanced techniques are included in the **Lincoln Factory Executive Service.**

Learn more about this thorough home study course. Write today for free 48 page descriptive booklet, "Getting Ahead in Industry."

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1401 W. 75th St., Cleveland 2, Ohio
"The School of the Factory Executive"
Louis S. Vosburgh, President
J. Francis Carle, M.A., Educational Director

"That's My Boss!"

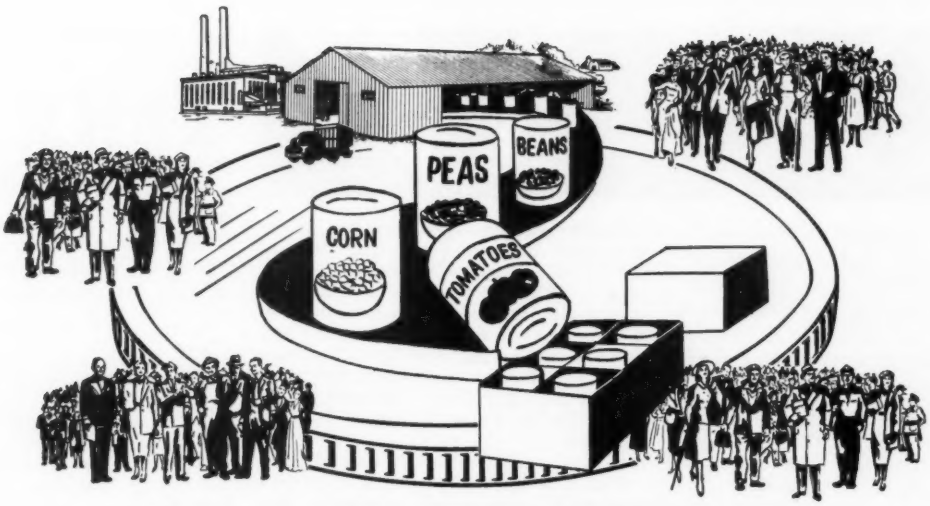
"There, in the brown hat—
"Remember, I've been telling you about him?
"Believe me, he's a smart cookie.
"He's tough, but he's fair too. The boys gripe, but they know he's okay. He's got a job to do.
"It's up to him to see to it that our department turns out what it's supposed to. If we fall down, he gets the blame.
"You ought to see him in the shop. He knows more ways to get things done right! He *has* to.
"It's men like him that make things go in our plant.
"I hope some day I'll get a chance at a job like that!"

Know who he's talking about, Mr. Foreman? . . . It's You!

Foremanship Foundation, Inc.
DAYTON, OHIO

FF

A non-profit organization supported by companies who believe that America's Foremen help steer America's future.



WHO GETS HOW MUCH FOR CANNING VEGETABLES IN AMERICA?

I

WHEN a carload of vegetables leaves a typical canning plant and the customer's check comes in, *who gets the money and why?*

(The figures that follow are the *average* of 1949 and 1950.)

First, there are all the people who supplied all the things needed by the plant — the raw vegetables, the cans, the cartons, the storage, shipping, etc.

These people get 82.3 cents of the sales dollar.

Then there are the people who work in the plant, in the office, and in the sales department of the canning company.

For their work — their human energy — these people get 11.3 cents.

Next come the tax collectors and tax beneficiaries: they get 3.3 cents.

The fourth group are the stockholders — the people whose savings made the canning company possible: they get 2.1 cents, which amount is known as "profit."

This leaves 1 cent that didn't go to anyone: it was put aside to cover the cost (depreciation) of the tools wore out in the process of production.

II

FROM the standpoint of what the company got, the income statement would look like this:

WE RECEIVED FROM CUSTOMERS	**100.0¢**
THIS WAS USED TO COVER THE FOLLOWING COSTS:	
1. THE COST OF GOODS AND SERVICES BOUGHT FROM OTHERS	**82.3¢**
2. THE COST OF THE HUMAN ENERGY OF OUR EMPLOYEES	**11.3¢**
3. THE COST OF TAXES	**3.3¢**
4. THE COST OF TOOLS WEARING OUT	**1.0¢**
5. THE COST OF USING THE TOOLS	**2.1¢**
TOTAL COST	**100.0¢**

III

WHEN an income statement is put in this form, it is easy to answer a very interesting question: how much control does the company have over its costs?

It goes without saying that management would not pay any more than it had to for the outside goods and services contained in Item No. 1.

Item No. 2, the wages and salaries of the employees, is controlled largely by union contracts.

Item No. 3, taxes, is beyond the control of management.

Item No. 4, depreciation, is not controllable.

Item No. 5, "profit," is the only item over which management has substantial control, but if it is raised too far, the customers will stop buying and the company will have to stop producing.

It might be said, therefore, that the cost of canned vegetables, to all practical purposes, is controlled by forces *outside* of the canning industry.

Incidentally, the same thing is true of most products today.

"BETTER AMERICA" series of illustrated editorials presented as a public service by MANAGE Magazine.

Fifth in a series of twelve. Statistics by The American Economic Foundation. Reprint permission on request.

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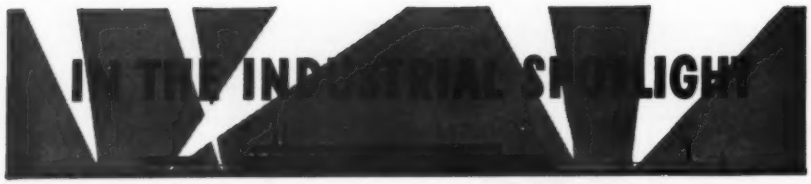


Thurman Sensing of the Southern States Industrial Council recently commented that "Basically, the free enterprise system means freedom of the individual. Under the free enterprise system, the individual is *free* to make something of himself *if he has the enterprise to do it.* Too many people put too much emphasis on *free* and too little emphasis on *enterprise.*"

* * *

Paul W. Pearson, president of the Industrial Equipment Co. of Chicago, has announced that the firm name has been changed to Industrial Crane & Hoist Corp. to better identify the firm with the cranes, runways and hoists it manufactures.

* * *

George Spatta, president of Clark Equipment Co., Buchanan, Mich., and H. B. Ross, president of Ross Carrier Co., Benton Harbor, Mich., announced recently that Clark Equipment would acquire the capital shares of Ross Carrier owned by the Ross family and such other shareholders as become parties to the agreement.

* * *

The appointment of Edwin H. Walker as president and general manager of McKinnon Industries, Ltd., subsidiary of General Motors, St. Catharines, Ontario, was announced recently. Mr. Walker succeeds Thomas J. Cook, who is retiring after 28 years with General Motors.

* * *

As a result of decertification elections held last month at Fort Wayne and Decatur, Indiana, IUE will no longer be the bargaining agent for four salaried units of General Electric. They voted in favor of "no union."

* * *

Manufacturers will get a preview in June of the effect atomic energy will have on their products and production methods, when Dr. Carson Dalzell, chief of the reactor materials division of the U. S. Atomic Energy Commission, speaks before the first Conference of Basic Materials at the Hotel Roosevelt, New York.

* * *

General Motors announced last month a downward revision of 1 cent per hour in its cost-of-living allowance to approximately 397,000 hourly rate employees resulting from a decrease in the nation's cost of living index.

A new division has been set up by Standard Pressed Steel Co., Jenkintown, Pa., to manufacture and sell a new SPS product—a self-locking, spring-pin fastener. Production machinery, inventory, patents pending and other assets of the Self Lock Fastener Corp. for the Sel-Lok spring pin were bought from the Rafter Machine Co. of Belleville, N. J., and shipped to Jenkintown.

* * *

The American Institute of Electrical Engineers announced recently the awarding of the 1952 Lamme Gold Medal to I. F. Kinnard, engineering manager of the Meter and Instrument department of the General Electric Co., West Lynn, Mass., "for his outstanding contributions in design and developments in instrumentation and measurements."

* * *

George Fielding Eliot, writing in the April issue of Steelways, says that manpower, America's most valuable asset, is in danger of becoming one of the nation's most critical shortages, due to the placing of 3.7 million young men into the armed services and the diversion of 7.7 million workers into defense production.

* * *

Roger F. Waindle, vice president of the Cannon-Muskegon Corp. of Muskegon, Mich., was elected president of the American Society of Tool Engineers at their annual meeting in Detroit recently. He succeeds L. B. Bellamy of Detroit.

* * *

A new seven-passenger S-55 Sikorsky helicopter—believed to be the first ever used for "corporate" travel—is helping Rockwell Manufacturing Co. solve its transportation problems between its main offices in Pittsburgh and seven plants within an approximate 200-mile radius.

* * *

John T. Ryan, Jr., executive vice president, Mine Safety Appliances Co., was awarded the Duquesne University Management Award "for leadership in management" at the third annual conference sponsored by the University's chapter of the Society for the Advancement of Management.

* * *

Howard Winterson has been appointed director of industrial relations of Blaw-Knox Co., it was announced recently by W. Cordes Snyder, Jr., president. Mr. Winterson was formerly with Kingan & Co., Indianapolis meat packers.

The addition of an Industrial News Office to provide television and radio with news on industrial and technical developments of its clients has been announced by Denham & Co., Detroit industrial advertising agency. "Industry must keep the general public informed of its advances. It can no longer afford to neglect the vast public impact of television and radio."

* * *

The appointment of Royston Crewdson as representative of The Kuljian Corp. in the Far East, with headquarters in Tokyo, has been announced by James L. Cherry, executive vice president. Mr. Crewdson spent six years with the American Administration in Japan under General MacArthur, assisting in the rehabilitation of the Japanese rayon industry.

* * *

The Dravo Corp., Pittsburgh, Pa., has received the National Safety Council's highest award for its 1952 accident prevention record which was 50 per cent better than its previous three-year average and the three year average of the industry. Dravo is the first firm in the heavy construction industry to win such an award.

* * *

The American Tank & Fabricating Co. of Cleveland, Ohio, has announced the appointment of two new vice presidents. Kenneth J. Humberstone has been named vice president in charge of engineering, manufacturing and sales, while George F. Franck is now vice president in charge of steel warehouse sales, flame cutting and metallizing.

* * *

Events are pressing industry toward the day when 15 per cent of its capital outlay for machinery and equipment will be spent for instruments of measurement and control, the Boston Society of Security Analysts was recently told by Henry F. Dever, president of the Brown Instruments division of Minneapolis-Honeywell Regulator Co.

* * *

Not a strike in its history, not a single grievance in 1952, was the record of industrial peace written at Fairport, N. Y., by Local Lodge 1439, International Association of Machinists (AFL), and the American Can Co., according to the findings of a study just completed by the New York State School of Industrial and Labor Relations, Cornell University.

WHAT LABOR IS SAYING

This is a digest of the expressions of organized labor groups and leaders throughout the United States. MANAGE offers this objective report of the thinking of organized labor as a special service to management.

● AFL PRESIDENT GEORGE MEANY recently pledged his support of the campaign to "Buy Union Label Hosiery for Mother's Day." He said as consumers, trade unionists have a deep responsibility to fellow members.

● THE AMALGAMATED ASSOCIATION of Street Electric Railway and Motor Coach Employees, Local 1358 (AFL) of Atlantic City recently ended its walkout against city bus lines. The strike had eventuated because of teen-age rowdyism on the special buses used by high school students.

● CLEVELAND TRUST CO. has been charged by CIO Financial Employees Guild LIU 1757 with engaging in such unfair labor practices as granting wage and vacation increases in an attempt to halt union activity.

● AFL NEWS REPORTER accuses the Eisenhower administration of seeking ways and means of firing workers with civil service status from government agencies to make room for job-hungry Republicans. This labor organ adds that if Ike can't accomplish this through existing laws relating to such workers, he will merely change the law.

● UNION LABOR DIGEST NEWSLETTER reports the following grievance. "A foreman reprimanded a girl for eating on company time and she cussed him out in very 'unlady-like language,' for which she got a five-day layoff. The union involved declared that a one-day layoff was sufficient because she delivered her profanity to the foreman in complete privacy."

● AMONG THE CHANGES RECOMMENDED by the AFL to be made in the Taft-Hartley Act is one which would permit plant guards, professional workers and supervisory employees who are not actually top foremen to join unions.

● THE CIO NEWS reports that a committee appointed by Governor John S. Fine of Pennsylvania found that 90% of that state's employers engaged in job discrimination against Negroes, Jews and other religious and nationality groups.

● CIO SECRETARY-TREASURER JAMES B. CAREY in a recent speech before the Philadelphia Bulletin's Annual Forum said "Free enterprise, as represented by the National Association of Manufacturers and the Chamber of Commerce, does not seek just more 'freedom' for its own affairs. It seeks more 'freedom' to limit the political and economic freedom of the people generally."

● THE SUPREME COURT recently upheld legality of Musicians' Union contracts requiring theater owners to hire local orchestras also when traveling "name" bands appear at their theaters.

● THANKING THE CIO for solving the AFL'S Communist problem, AFL President George Meany says that the Communists disappeared overnight into the CIO when it was formed. "John L. Lewis took them to his bosom and kept them there," he added.

● LABOR PUBLICATIONS are blasting the newly-created Federal Department of Health as an underhanded deal between the Eisenhower Administration and the American Medical Association.

● THE RAILROAD SIGNALMEN have defeated the American Railway Supervisor's Association in a special election held to decide whether the union had the right to represent foremen at the Kansas City Terminal.

How would YOU have solved this?

NOTE: In order to be considered for cash awards and the certificates of special citation, all solutions to the "How Would You Have Solved This" supervisory problem must be postmarked not later than May 28, 1953. Address your solutions of no more than 500 words to Editor, MANAGE, 321 W. First Street, Dayton 2, Ohio.

HERE IS THE SUPERVISORY PROBLEM FOR MAY

Howard Morgan is in charge of the maintenance department of a small-town manufacturing company whose policies are anything but progressive. Wages are poor; working conditions are inferior; employee benefits are practically nil.

In the past this company, Midville Manufacturing, has been able to carry on business as usual even under these conditions, and there has been little or no agitation for improvement. One of the factors contributing to this is the fact that the workers are not unionized. Even more important has been the fact that this company has been for many years the only large industry in the community and, hence, there has been no competition for the labor pool of the area.

But in the past year, this second factor has suffered a death-dealing blow. A large munitions factory was built on the edge of the city. Due to numerous government contracts won by this firm, employment there has zoomed and along with it wages. As a result, Midville Manufacturing is losing employees daily because they can get better jobs and better benefits at the munitions plant.

Nevertheless, Howard Morgan's employers are still plodding along with their old policies, ignoring this turn-over and accompanying production losses as a bad dream that will pass. Howard and other supervisors have tried to secure new policies, but top management stands pat on the old.

Every month Howard loses more employees. The quality and quantity of the work done in his department is definitely suffering. The remaining employees—and any new ones he can snare—are discontent. He is at a loss what to do since he himself cannot raise wages or institute new benefits. In the ten years he has been a maintenance engineer, he has never had to deal with employee dissatisfaction in this proportion.

What can Howard do to keep his employees during this present hiring boom in the community? What incentives can he use to once again produce efficient work in his department? Are there incentives at his disposal more attractive than higher wages and employee benefits?

Here Was the April Supervisory Problem

Jim Jones is the manager of the sales planning department of a large paper corporation, a position which he has held for two years. He joined the company as a sales representative upon graduation from college ten years ago and has worked his way up the ladder to the position which he now holds.

Jim is a very competent supervisor. He has a good background of work in the field. He has held several lesser supervisory positions before being made manager of his department and did each job well. The relationship between Jim and his subordinates has always been a happy one. In other words, Jim is a definite asset to his company—that is, during working hours. After hours is a different story.

Jim's weakness is too much drinking. He is drunk on an average of three nights a week and, as the company is situated in a small town, is often seen by his fellow workers, subordinates and the townspeople in this condition. Jim, a bachelor, usually drinks in local bars and roadhouses where he is recognized and people have come to associate him with his company. This association throws a very bad light on the company name and has caused its executives no little embarrassment and worry.

As was stated before, Jim only drinks heavily when away from the company. At company functions, sales meetings and conventions, he drinks socially and conducts himself in a manner above criticism. He does not seem to realize that although he is disassociated with the company physically when in this condition, still his actions are linked with his company and are hurting its good name in the community.

Company executives, although worried, have tried to overlook the situation because of Jim's past record and because his drinking has not affected the quality of his work. But the situation has become so embarrassing that it can no longer be overlooked.

Friends within the company and the general manager have spoken to Jim about the situation, but their tactful suggestions have not been effective. Now some positive action must be taken. What would you do about Jim's behavior if you were the president of this company?

APRIL WINNERS

Following are the best "solutions" to the supervisory problem of the April issue. The men who wrote them have received checks for $10.00 each and a handsome two-color Merit Award certificate for framing.

No Holds Barred

By J. E. Schwertfeger, American Car & Foundry Co., New York, New York.

Sometimes tactful suggestions or friendly talks do not solve problems. In most cases these supposedly helpful hints are acknowledged with a shrug of the shoulder and the problem continues.

In Jim Jones' particular case, I (as president) would personally handle his

problem, as his supervisor and his friend. A "no-holds-barred" discussion of Jim's problem perhaps might be the solution.

It would:

1. Open Jim's eyes to the fact that his after-five drinking habit has grown so as to warrant the attention of the top executive.

2. Show that the president is *genuinely interested* enough in Jim to take time in his own busy routine to discuss Jim's problem.

3. Show that because of the president's sincere effort to help iron out Jim's problem, he personally recognizes Jim as a valuable asset to the company.

4. Because of the verbal recognition and high regard of his work by the president in such an honest manner, it would make Jim realize that unless this drinking is halted, it could ruin a very promising career in the company.

5. Show him that his own reputation as a topnotch salesman as well as the company's name is being questioned daily, a fact which could produce a situation in which Jim would be requested to leave the company rather than cause more talk.

A heart-to-heart talk such as this, searching for a solution for his drinking problem with Jim's interest in mind would cause some serious thought on Jim's part. As an intelligent man, he would weigh the many angles of his problem and aided with patience and understanding on the company's part, the problem could be solved.

Determining the Cause

By James R. Johnson, Bendix Aviation Corp., Kansas City, Mo.

It is obvious that dismissal of Jim Jones would be a great loss to the company. On the other hand, if his present evening behavior persists, company prestige and respect for company officials will be endangered. The solution of the problem is: (1) to determine the cause or causes of Jim's behavior; and, (2) effect a remedy.

The causes may be determined by a study of Jim. Analyze his employment record, family background, college career, hobbies, etc. Learn more about him by interviewing his associates. Get to know him personally through informal dinners, golf games, etc.

From the facts given it appears that Jim Jones is an ambitious person, full of initiative and possessing a pleasing personality. Being a bachelor, it is apparent that he satisfies his need for companionship at local bars. Since he does not drink to excess at social function, it apears that he *can* control his drinking. Based on these observations, we can assume that the cause of his drunkeness is his prolonged stays in the taverns to satisfy the need of being with people.

One approach to the solution of this problem is the use of counseling. When you have obtained all the pertinent information regarding the man, arrange for a private conference with him. Give him to understand that the reason you have called him up to talk is to try and clear up whatever is bothering him. Explain how you have come to notice his evening behavior and point out that it has a bad effect on the company as a whole and that you want to help him.

Next, assuming that "after hours" need for companionship is the cause for his drinking, you might appoint him chairman of some company recreation activity, sponsor him in some form of higher education course for executive training or interest him in some local civic project. Such pastimes would in addition to providing companionship, present an outlet for the initiative, aggressiveness and energy he has displayed in the last ten years.

Paying the Price of Leadership

By F. W. Harbaugh, Lockheed Aircraft Corp., Georgia Division, Marietta, Ga.

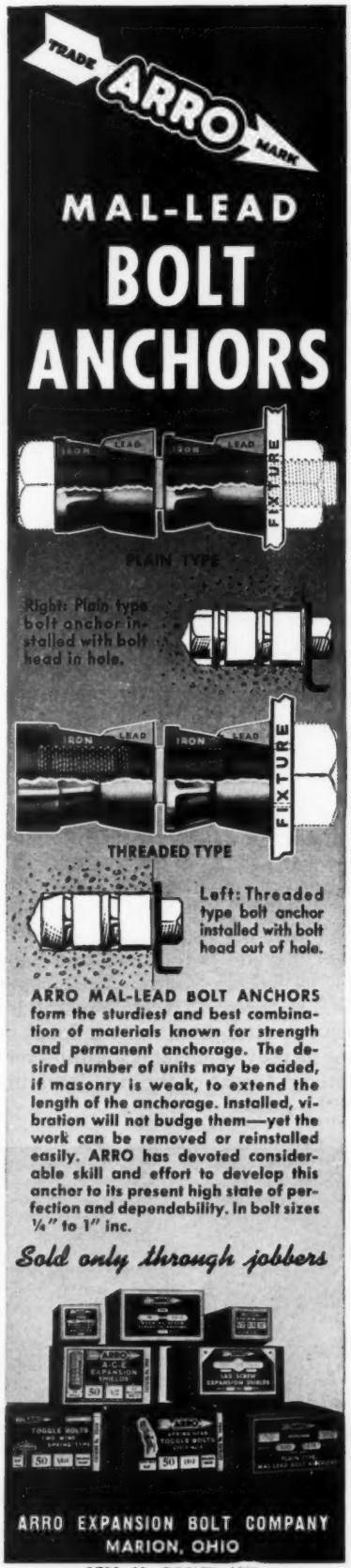
Jim Jones presents one of the most difficult problems in industrial relations, involving apparently an emotional disposition as well as a deep-rooted habit pattern of the subject. Luckily he has already demonstrated a general competence in business leadership. The president of the company will probably have to appeal directly to Jim's reason to avoid alienating him or having to ask him to resign.

My approach to this problem would be to summon Jim Jones to my office for a private conference about mid-morning of the first day when it appears he is feeling his best. In the pleasantest and friendliest manner I am capable of, I think I would speak about as follows.

"Jim, sit down and make yourself comfortable. I want to talk with you for a few minutes about a serious problem the company is facing and I'd rather you didn't interrupt or say anything at all until I have finished. First, I want to remind you of something which I think you know already. You stand ace-high in the respect of the company and its officers, and of the people in your department, and you have that respect because you have earned it. I think that respect would follow you, as a business man, even if you quit tomorrow to take a better paying job with another company and told us all to go to hell. I don't think you'll do anything like that, of course, because I know how much you think of the company and your associates here. And besides you have already shown great promise in junior administrative work. Both of us know that your future is here.

"Now for the problem, and I'll toss it

(Continued on Page 34)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Right: Plain type bolt anchor installed with bolt head in hole.
THREADED TYPE
Left: Threaded type bolt anchor installed with bolt head out of hole.
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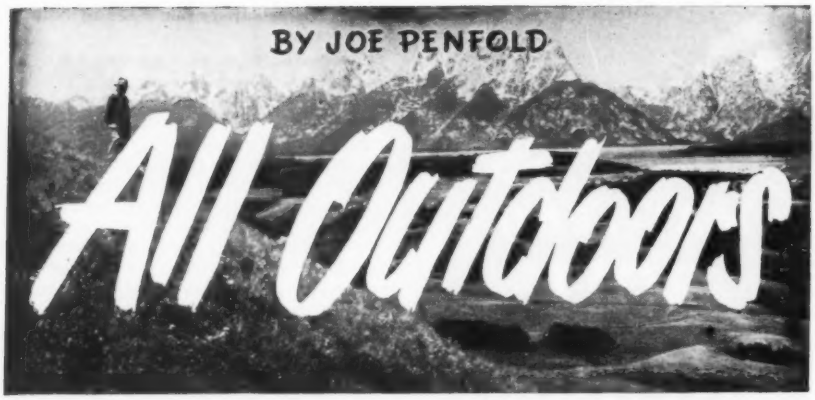


Arizona has a lot to attract the hunter and fisherman, as members of the Hughes Tucson Management Club are discovering. The Salt River Lakes—Canyon, Apache and Roosevelt—are within four hours easy driving. The White Mountains with their many fine trout streams are about five hours away.

Ed Hunt reports that in February some 23 Hughesites made the trip to Apache Lake for a club-sponsored fishing contest. Jesse Smith took top honors with a 3¾-pound largemouth bass. Ed reports also that club members were pretty active during the last wild pig season. That's the javelina, the only wild boar native to North America. Arizona and Texas are the only states having open seasons for hunting them. A really big one would go 175 pounds, but the average is considerably smaller.

Trout seasons around the country will have been opened by the time you read this, which gives us an excuse to picture a dandy rainbow landed by some unnamed fisherman. (See opposite page.) Note the rig he used—a flyrod with a spinning (or more properly, a slip-cast) reel. With bait can on his belt we can't be sure whether the rainbow lost to a small spinner or wobbler spoon or to lowly garden hackle. In any event the slip cast reel or spinning reel greatly broadens the fisherman's opportunity to snag a lunker.

More and more fishermen are going out with both a regular fly line reel and a slip cast, using the same flyrod for either. If the fish aren't rising to flies, a switch of reels permits effective use of small lures of many varieties and long casts which means covering a lot more water.

You'll note the reel pictured releases the monofilament line through a hole in the side of the metal case. This type of reel puts a small amount of friction on the line, which is largely absent in a true spining reel. The spinning reel, with its spool facing forward in the direction of the cast, permits the line to uncoil and slip off the spool with no friction. The spinning reel consequently will handle slightly smaller lures, and a slightly longer cast. There's little difference however, as far as the average fisherman is concerned. The side delivery slip-cast reel has the advantage of being more usable on ordinary flyrods, which do not have the larger size guides of a proper spinning rod. The larger guides serve to straighten out the loops of line as they come off a spinning reel without threat of the line jamming in the guide.

WASHINGTON NOTES

Two more bills have been introduced in Congress which should be of interest to all sportsmen. HR-4023 in the House of Representatives, and S-1491, its companion measure in the Senate. These bills propose to give to western stockmen who are privileged to graze on the national forests and the federal public domain vested rights in those public lands. Conservationists fear that such a move would place those stockmen in a position to dominate administration of public lands and mitigate against the other great resource values, such as watershed protection, timber production, hunting and fishing, recreation and so forth. Major western newspapers have editorialized that these bills should be defeated.

We mentioned earlier HR-1972 which would set aside 10% of national forest receipts for maintenance and improvements of recreational facilities in the national forests and for the improvement of wildlife habitat. The House Committee, of which Congressman Clifford Hope is chairman, held a public hearing in Washington during the annual North American Wildlife Conference. Testimony in favor of the bill was heard from key recreation and wildlife people representing every state in the nation. Whether or not the bill passes, there can be no question in the minds of the Committee members that the millions of national forest users want the forests properly maintained.

Fishing for bass in Apache Lake are Hughes Tucson Management Club members Phil Lubin, W. S. (Bill) Vance and Jesse Smith, pictured left to right.

Edwin M. Hunt Photo

George D. Andrews Photo

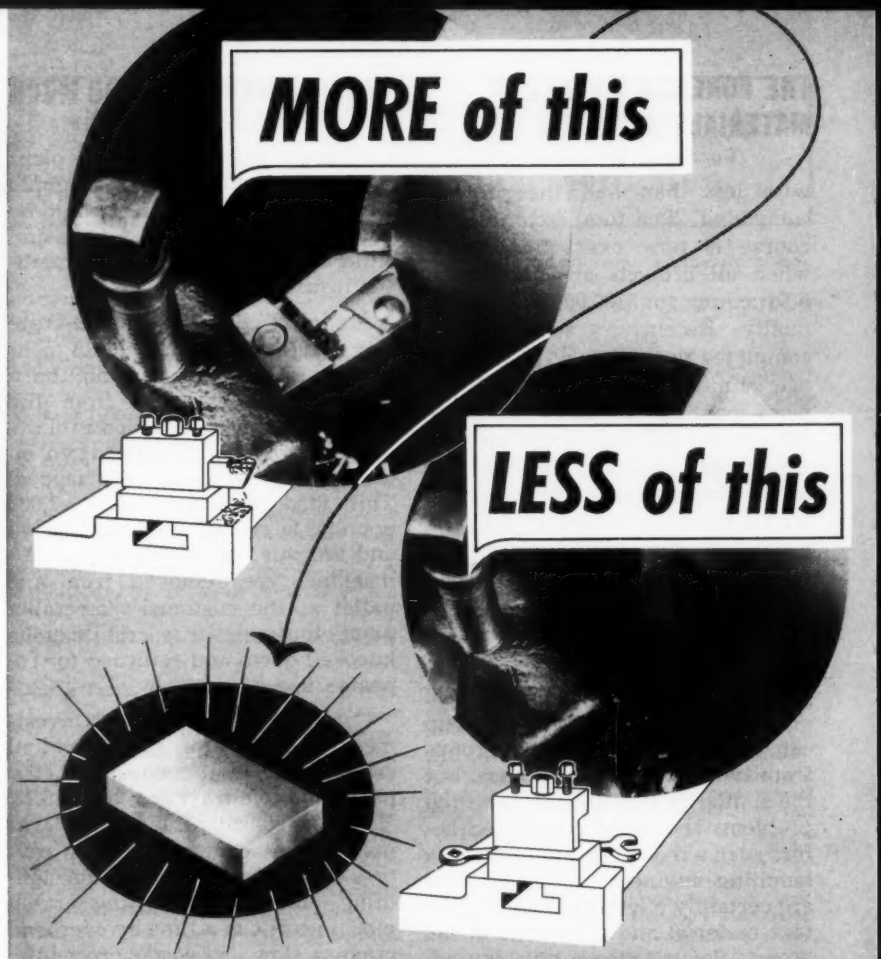
EROSION—AND FISHING

R. W. "Doc" Eschmeyer, president of the Sport Fishing Institute recently made a very significant talk before the annual meeting of the League of Ohio Sportsmen. "Doc" said, "Nationally, siltation has probably been the biggest single contributor to the gradual decline in our fish catch on inland waters. Most of the siltation which has taken place can be attributed directly to human activity—our farming and ranching, our road building, our cutting and burning of forest."

He points out a few optimistic signs, however. First, the great strides made in recent years in conservation farming through the vast program of Soil Conservation Districts. Also the growing interest and concern in the fundamental problems evidenced among sportsmen and sportsmen organizations. There is a big job to be done on the land. Even the city dweller has a stake in it and an opportunity to help get the job done.

PICTURES AND FISH STORIES

Most of the readers of this page are now making fishing history. How about passing on your experiences and your sport, so we can all enjoy it.



How to Reduce
"LOST-BUT-PAID-FOR" HOURS

Shut down of a machine for tool change does not shut off operating expense. Production stops, but costs run on.

There's a way to minimize this non-productive time . . . Kennametal tools seldom need replacement — hours on the machine, minutes being reground.

Kennametal is "different" — ingredients, compositions, processing. The resultant distinctive characteristics are utilized to a maximum degree in novel tool designs — especially the clamped-on technique — in which we pioneered.

How Kennametal reduces Lost-but-Paid-for-Hours is disclosed by case studies in periodically-issued Performance Reports, and can be demonstrated in your own plant. Such information and help is yours for the asking. Kennametal Inc., Latrobe, Pa.

KENNAMETAL
CEMENTED CARBIDE TOOLING
THAT INCREASES PRODUCTIVITY

THE FOREMAN'S STAKE IN MATERIALS HANDLING

(Continued from Page 7)

with less than half the projects completed. The total for that first course is now over $75,000 and when all projects are finished, it will climb to $130,000 saved annually. Recently, a second group completed the course with an average annual savings of $5500 per participant by the end of the course with only a fraction of the projects completed. And this applies only to the first projects; the now materials-handling-conscious supervisors are discovering more projects within their own shop areas.

The factors that should be considered when such a course is being contemplated are neither complex nor many. The course is best given for groups of 25. This group can be made up of smaller groups from two companies, of course, but the similarity in materials handling problems should be considered before such a move is made. Materials handling engineers or consultants are certainly eligible to prepare the text material and present it to the group. Some colleges give courses in materials handling and these can be readily adapted to most training programs. It will cost somewhere in the neighborhood of $200 per participant to give the course, depending upon the facilities already available. The return should be at least 10 times the investment if the training is done on a responsible basis.

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"MUSCLE MEN" COST TOO MUCH

(Continued from Page 9)

A study initiated by the plant supervisor indicated that a simple materials handling system could be devised to please the customers and still effect a saving over the methods in use.

A special collapsible pallet-crate was designed for Customer A, consisting of a pallet and two auxiliary trays. Machines fresh from the paint shop were assembled in units of six—two on the pallet, two on each tray, all securely strapped. This load, weighing about 1,900 pounds, is stored, handled, loaded and unloaded as a unit. When the machines are removed from the pallet at the customer's assembly plant, the pallet-tray crate can be knocked down and returned for repeated use.

Compared to an original investment of $26.10 for six individual crates, none of it recoverable, the pallet and two trays cost only $6.75. Yet this considerable saving was insignificant compared to the savings of man-hours required for handling. Instead of loading crated machines one at a time by overhead crane, a slow and costly procedure, one man can load twelve unit packages—72 machines in all—in only 20 minutes.

For handling the uncrated machines, it was relatively simple to design a carrier unit to hold three machines. With this system, an operator and helper using a fork truck can load a delivery truck in 30 minutes—an operation that formerly required an hour and a half.

Modern materials handling systems can be applied to plant operations other than those related to actual manufacturing to yield savings of time, money, and human effort. For instance, a metal working company in Michigan had six men—two on each of three shifts—stoking and maintaining the furnaces. The cost of this operation constantly exceeded the allotted budget by more than $100.00 each week. The plant superintendent was determined to operate according to budget and still maintain efficiency. He decided to ask the advice and cooperation of Clark's materials handling engineers in the solution of the problem. And the solution was relatively simple.

A pneumatic-tired industrial truck, the Yardlift-40 with a 15 cubic foot shovel attachment, was installed for the sole purpose of transporting coal from an outside storage area to the furnaces. One man on each shift now handles the entire operation with ease, and the truck is in use 24 hours each day, indoors and out—using tire chains in bad weather. Even under the extremely cramped working conditions in the boiler-room, the truck performs in an efficient, easy-to-handle manner. Result—a saving of 96 man-hours each week and efficient operation while meeting the budget.

As mechanical materials handling comes fully of age, it leaves its mark on the layout and design of other plant facilities. Forward-looking management thinks of mechanized handling as an integral part of planned production, and new facilities are designed to take full advantage of these new methods. For instance ceiling heights, aisle arrangements, space allotments and doors of warehouses are all carefully planned on the basis of time studies and analyses of material flow using industrial trucks and auxiliary handling equipment.

Any business, it seems, has in its operations many latent opportunities for the application of mechanical handling with resultant substantial savings in operating costs. All you, as plant management, need do to uncover these opportunities is to look for the "muscle men" in your plant, and then get mechanical "muscles" to do the job.

MATERIALS HANDLING IN FOUNDRY OPERATIONS

(Continued from Page 13)

to handle castings from shakeout to the first cleaning operation, but most jobbing foundries cannot. From the point of the first cleaning operation foreward the most widely used handling method is the em-

(Continued on Page 34)

★ MANAGE SERVICE BUREAU ★

New Products and Free Publications for Management Men

Save On Your Clothes

Dynel fabric is the secret of **M.S.A. ChemKlos** resistance to acids and caustics. This new fabric is inherently chemical resistant . . . the greater life is in the fabric, not added by chemical process.

From collar to trouser bottom these clothes meet comfort and style demands of workers everywhere. Smart looking in serviceable gray. A good buy for you and worthwhile for you to suggest to your workers, who appreciate a tip from you that saves them money. It costs nothing to get a bulletin on **ChemKlos**, just—

CIRCLE 501 ON SERVICE COUPON

Burns Through Anything

Did you ever see a thin stream of arc flame pierce through a chunk of granite rock? Did you ever see sandstone, or slag, or slate **melt** into a molasses-like glowing lava? This is done by the amazing new **"DynArc Process"** and **"DynaTrode,"** developed by **Chemotec Division, Eutectic Welding Alloys Corporation.**

This DynArc Process ushers in a new era. An arc-rod is used for the first time upon non-conductive material and without a ground connection. Process may be used wherever a DC welding machine of 400 amp. or more is available.

Space here is not sufficient to describe this astonishing process. Booklet about it is free to readers of this magazine.

CIRCLE 502 ON SERVICE COUPON

Slow Down, Cowboy!

Fascinating, entertaining and educational is **Clark Equipment Company's** booklet "Safety Saves." It contains 44 rules on safe driving of industrial trucks. It's presented in cartoon style which makes you chuckle, but impresses on you the rule at the same time.

For your copy—

CIRCLE 503 ON SERVICE COUPON

A New Industrial Tool

Many industrial identification problems can be solved with the new self-sticking **Write-On** labels developed by **W. H. Brady Company.**

This item combines a printed form and write-on space all on one quick-to-use label. Can be used throughout the plant. As a supervisor you may have need for this. It costs nothing to get more information and free samples—

CIRCLE 504 ON SERVICE COUPON

Handy 'Desk Calculator' Free

A six-page, pocket size folder entitled "Desk Calculator" is available from **Pangborn Corporation.** It presents in easy-to-use form formulas, constants and conversion factors useful to engineers and supervisors.

Included are geometric relationships for circles, squares, cylinders, spheres, pyramids, cones, trapezoids, etc.; measures of pressure; and calculation guides for determining tank capacities in gallons; metric measurements and conversion factors.

All-in-all it's a handy item in production work. Yours free, just—

CIRCLE 505 ON SERVICE COUPON

Heats In Three Seconds

The "Quick-Hot" Electronic Soldering Gun heats in three seconds when trigger is pressed, also cools quickly when trigger is released.

This popular tool for production plugs in on ordinary 120 volt A.C. Other features are: tips are long—reach inaccessible spots—are rigid—stay tinned and are easily replaced. A good item for your shop (or home workshop). Descriptive folder is yours—

CIRCLE 506 ON SERVICE COUPON

New Literature Offered

(Circle the Number on Service Coupon)

507—A new 16-page catalog showing the **Tote System** answer to bulk material handling problems has just been published by **Tote System, Inc. Tote** is described as a complete, mechanical, automatic system for filling, transporting, storing, discharging, weighing and blending all types of bulk materials, including liquids.

508—Complete information about how to use **Magic-Vulc** plastic rubber for repairing conveyor belts is contained in a new folder now being distributed by **Magic Chemical Company.** Names of industrial users and actual case history reports are included, showing that use of Magic-Vulc has often doubled or tripled belt life, with savings in belt replacement costs mounting up to thousands of dollars.

509—Get a sample copy of "Know How," twice monthly news letter on personnel and industrial relations offered by **Management Service Publications.** Learn more about this service.

510—A special Catalog of personnel tests and employee relations material, developed for business and industrial use, has been prepared by **Science Research Associates,** leading publishers of psychological tests. These materials are designed to help select better employees, improve operating efficiency, increase the effectiveness of supervision, choose employees for promotion, reduce employee turnover, prevent accidents on the job, and increase employee performance.

511—Circular on "E-Z Climb" two wheel utility hand truck for moving material up and down stairs, curbs, and multi-level passageways available free from **Automatic Bending Company.**

Literature Offered In Ads

Apex Machine and Tool Co. (see page 22) will send you catalog 29 which describes a complete line of production tools specifically designed to meet every nutrunning requirement.

CIRCLE A521 ON SERVICE COUPON

Kennametal Inc. (see page 31) offers periodically-issued performance reports on how to reduce Lost-but-Paid-for-Hours.

CIRCLE A522 ON SERVICE COUPON

Lincoln Extension Institute (see page 23) offers 48 page descriptive brochure "Getting Ahead in Industry."

CIRCLE A523 ON SERVICE COUPON

International Correspondence Schools (see page 32) offers descriptive literature on management courses.

CIRCLE A524 ON SERVICE COUPON

Note: Inquiries for the items listed above will not be serviced beyond June 30.

MANAGE MAGAZINE 1953 — MANAGE SERVICE BUREAU

321 W. First St., Dayton 2, Ohio

Please send me further information on items circled below:

501	503	505	507	509	511	A522	A524
502	504	506	508	510	A521	A523	

Name ..... *Position* .....

Firm ..... *Business* .....

Please check one ☐ Firm address ☐ Home address } *Street* .....

City ..... *Zone* ..... *State* .....

MATERIALS HANDLING IN FOUNDRY OPERATIONS

(Continued from Page 32)

ployment of tote pans and roller conveyor, or large containers and lift trucks. Here, again, however, the production foundry is in better position to take advantage of these means because only a comparatively few different sizes, shapes and weights of castings are involved.

All of the foregoing applies only to those foundries producing castings which vary in weight from a few ounces to 40 or 50 pounds. The materials handling methods and equipment described would not apply in foundries producing castings that weigh several tons.

WE CAN'T ALL BE PRESIDENT

(Continued from Page 17)

the church, the lodge, or the kids in the neighborhood. The main thing is, start somewhere and do *something.*

STUDY YOUR JOB AND YOUR WORKERS

The best way to improve the monotony of any job is to think up ways of improving the job. Instead of looking at it through the small end of a telescope, look at it from all the possibilities that it offers. Get yourself informed and keep yourself informed continuously on all the new developments in processes and equipment so that you can make your own job and that of the workers easier. Learn a little bit more about costs, processes and methods and spend a little more time planning and putting your plans on paper and records instead of keeping them only in your mind or in your back pocket.

Your men represent a gold mine of opportunity for your own development. Study them, learn a little bit more about their strong and weak points, their personal problems, what makes them do the things they do and above all, *listen.* You know when you are talking all the time there isn't much chance to hear what the other fellow has to say. Shakespeare makes the comment in one of his plays that "even fools have lapses into lucidity." You'll find you can learn a lot from your workers who are anything but fools.

TAKE PART IN MANAGEMENT CLUB ACTIVITIES

I know of no finer and more effective way for a man to grow and broaden himself than to take an active and leading part in his management club. Whether you are an officer, a committee member, correspondent for MANAGE Magazine or just a good participating member, you'll find that here is a rare opportunity to really develop. The slogan heard throughout NAF, "Through Association We Grow," is not a mere collection of fine sounding words. It is based on a long experience of more than 25 years. Instead of waiting until you are drafted into some activity, volunteer, because brother, let's at least be intelligently selfish about this thing. We gripe and wail about how tough we have it and what bad breaks we're getting. That doesn't take any effort. And that's exactly what it's worth, nothing. So let's get on the ball and stay on the ball. As we have repeatedly stated, not as a threat but as a fact: You either 'Grow or Go'."

BEGINNING

NEXT MONTH

"Washington Report for Supervisors," a copyright feature direct from the Washington MANAGE bureau where news of value to American business and industrial foremen and supervisors will be accurately reported and interpreted.

The feature will be written by Harold Arbeen, a departmental editor for the Washington Times-Herald and formerly of the San Diego Union and the Chicago Tribune business news departments.

Mr. Arbeen will write directly to first and second line management profession people, taking into consideration that many wives of management men are among the most enthusiastic readers of MANAGE. He will report the news as it comes off Capitol Hill, and will intelligently interpret the facts as they will affect the lives of men and women who have their securities anchored to the management profession.

"Washington Report For Supervisors"

Another "first" for MANAGE Magazine

APRIL WINNERS

(Continued from Page 29)

right in your lap. You have reached that point, Jim, where the responsibility you have taken with the company has begun to identify you *personally* with the dignity and integrity of the firm, inside the office and out. This is one of the prices each of us has to pay when he begins to take leadership in business, and no small element of this company's success is based on the willingness of its leaders to pay that price. Paying that price means, among other things, that the leaders must at all times exemplify dignified personal conduct in public places, even where they may think themselves strangers.

"I'm pretty sure you'll agree with me that that's a fair price to pay, Jim, and I'm going to have to count on you from now on to join the other leaders of the company in a constant alertness in your personal behavior outside the office. Your personal affairs are never *entirely* your own unless you're a follower. As your friend, and because this company wants you for a leader, I want you to keep your visible personal activities always above reproach from now on. As with any other assignment, I'm not going to mention it to you again."

Greatest For Looks

● New "Low-Contour" Beauty!

Greatest For Power

● Mighty Fire Dome V-8 or Popular Powermaster Six!

Greatest For Steering

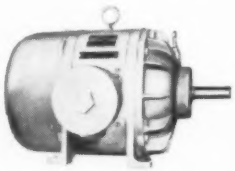
● *Full* Power Steering . . . Easy as Dialing a Phone!

1953 DE SOTO

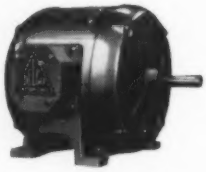
DEPENDABILITY...

that minimizes costs

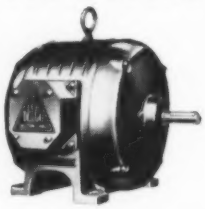
Delco Motors



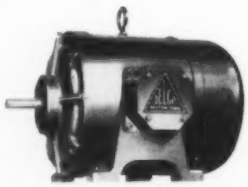
Explosion-proof motor



Open ball-bearing motor



Totally enclosed ball-bearing motor



Totally enclosed fan-cooled motor

With Delco integral motors on your machines you have a cost factor on which you can depend.

For Delco designs and builds with one idea in mind—to produce motors that will run dependably, under extreme conditions, for record-breaking periods of time.

Put your trust—and your motor dollars—in Delco motors . . . your nearest Delco sales office will help you with all details.

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